BULLETIN OF THE INSTITUTE OF THE HISTORY OF MEDICINE

THE JOHNS HOPKINS UNIVERSITY

Editor—HENRY E. SIGERIST

VOLUME V NOVEMBER, 1937 NUMBER 9

"MORE ABOUT OSLER"[1]

MAUDE E. ABBOTT B. A., M. D., LL. D.
McGill University, Montreal

I

TWO UNFAMILIAR PORTRAITS

Mr. President and Members of the Association:

The invitation to address you this evening has come to me as the result of a very delightful experience which fell to my lot last autumn. At that time I spent some six weeks on the Pacific Coast as the guest of the University Hospitals and the Women Physicians' Club of San Francisco, and the California Heart Association at Los Angeles. The ostensible object of the trip was the delivery of a series of lectures and clinics on Congenital Cardiac Disease at these centres and at Santa Barbara, but I was invited also to give several illustrated addresses on the life of Sir William Osler, for whose memory there exists in that district a great enthusiasm.

While at San Francisco, a schedule was forwarded me for the six days I was to spend at Los Angeles which included two items that proved to be the culminating events of the tour. These were a visit to the studio of Mr. Seymour Thomas at La Crescenta, a few

[1] Presented before the 13th annual meeting of the American Association of the History of Medicine at Atlantic City, N. J., May 3rd, 1937. Based upon an Address delivered under the Stanley P. Black Memorial Foundation, Pasadena, Calif., December 4th, 1936.

miles from Los Angeles, to see his great portrait of Sir William, and, on the evening following, a banquet at the University Club of Pasadena " with Dr. George Dock and friends as hosts," followed by my delivery, by invitation of the Committee, of the Stanley P. Black Memorial Foundation Lecture upon " The Influence of Sir William Osler; A Personal Reminiscence." It is of these two interesting experiences as well as of a second " unfamiliar " portrait, that I have to speak in the first place tonight.

The dinner at Pasadena took place on December 4th and was a delightfully intimate affair. Dr. George Dock, who was in the Chair, explained to me that the Stanley P. Black Foundation, under which auspices I was to speak that evening, had been established some years previously in honour of this, the first pathologist on the Pacific coast, whose work is recognized as having given the initial impetus to scientific medicine in that locality. The party accordingly adjourned later to the Memorial Hall which bears Dr. Black's name in commemoration of his services, and of the place which these have given him among the great names of the history of medicine, whose portraits line its walls. In that environment, so rich in associations and crowded to capacity with a sympathetic audience stirred by a common enthusiasm, I was privileged to present an informal illustrated talk, reminiscent especially of Osler's Canadian period, of his boyhood passed in the wilds of Ontario in its pioneer days, and of my own early contacts with him in the cataloguing of his Pathological Collections in the McGill Museum. Presided over as that gathering was by one who was both a pupil and a former interne of the " Chief " as well as his close personal friend, and whose long residence in Pasadena has naturally infused a deep interest in the Osler tradition in that locality, it was little wonder that a chord was touched that struck in not a few of those present, a thrill of real emotion. At the close of my address, Dr. Dock added some delightful personal reminiscences about the autopsies done by Dr. Osler at the old Blockley Hospital at Philadelphia during Dr. Formad's prolonged absences, and of the circumstances under which the first edition of his Practice of Medicine was written during his second year in Baltimore (Published verbatim below).

My visit to Mr. Seymour Thomas' studio took place on the kind

Fig. 1.

Copy of portrait of Sir William Osler painted in 1908 by Seymour Thomas, Esq. of La Crescenta, Calif. The photograph, taken recently by Dr. Elmer Belt of Los Angeles, shows the artist standing beside the framed picture.

introduction of Dr. Elmer Belt of Los Angeles, in whose car I was driven to the artist's beautiful home. The studio is a large roomy apartment in a building separate from the house but in the same grounds, containing a number of large canvasses, among which the life-sized Osler portrait (Fig. 1) occupied an easel near the centre of the room, which it seemed by its importance to dominate. Although a little stern in expression, it is unquestionably a striking likeness, the easy pose of the figure with its suggestion of latent strength, and the supple, exquisitely drawn, hands being entirely characteristic, while the eyes, piercing in their vitality, held one, as in life, by the quiet fire of their expression. The hour which I spent before it in that spacious studio held indeed for me a great experience, so profound was the impression it conveyed of the presence of the original, and so clearly did one feel again the impelling stimulus of his remarkable personality.

The Seymour Thomas portrait was painted in 1908 in Paris, where the artist was in residence at the time of Sir William Osler's visit there during the latter's "Sabbatical Year." It was not published either in the Memorial Volume or in Dr. Harvey Cushing's "Life," but it is mentioned in a letter from W. O. quoted in Vol. II, page 151 of the latter as follows:

> A friend of mine has insisted on having a portrait of me—so Seymour Thomas, an Amerian artist, is doing it—very good so far. Not quite so mediaeval as Sargent's.

This portrait did appear in the *John Hopkins Hosp. Bulletin* for 1919, but it is relatively little known at the present time outside of the State of California where it has become famous, being generally described there as "the best portrait of Osler ever painted." Its story is told by Dr. Belt in an inscription attached to a color-print recently made of it, for circulation among his friends, as follows:

> Christmas nineteen eight, Seymour Thomas began this portrait of Sir William Osler, who was taking a long-desired holiday among the libraries and clinics of Paris, the "brain dusting" he so often advised for others. Dr. Hugh Young, who had known Seymour Thomas from their boyhood days in Texas, arranged the meeting between his two friends. A series of delightful visits followed, at first over the teacups in Dr. Osler's apartment at forty-four avenue d'Iena, and later in the artist's studio. The two men

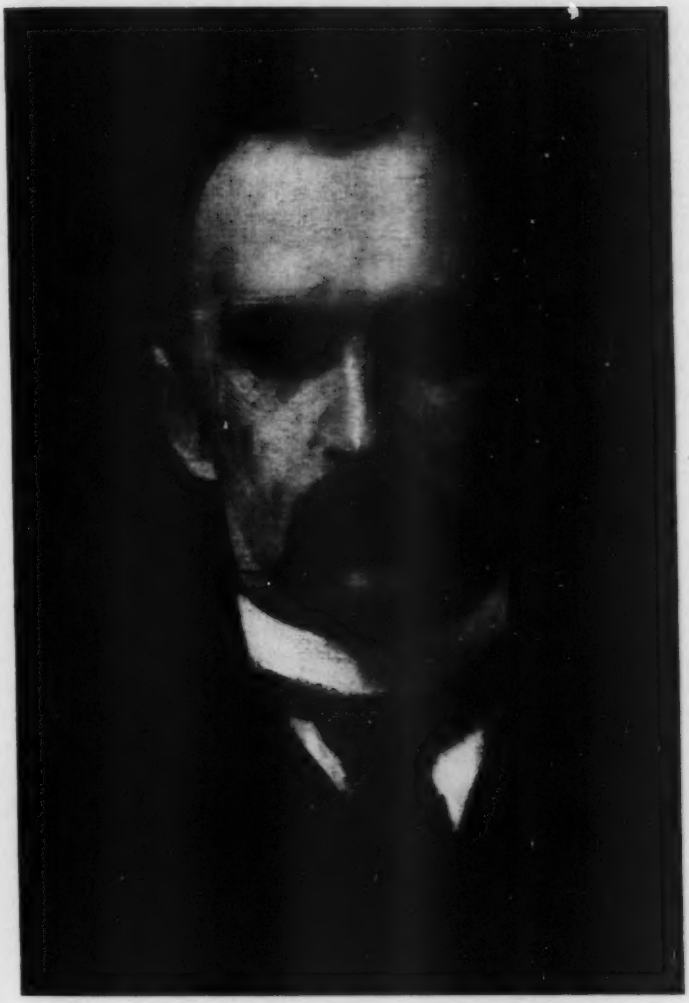


Fig. 2.

Copy of portrait-sketch of Sir William Osler painted in 1885 by H. S. Tuke, R. A. From the original in the Osler Library.

were at once in complete harmony and as a result the portrait progressed with great rapidity. In eleven hours it was complete, a *premier coup*, without a single correcting brush mark. The painting delighted Dr. Osler and with his characteristic sparkle he said to Mr. Thomas, "If you never part with that you'll always have a good doctor with you."

The second little known portrait (Fig. 2) which I would like to bring to your attention tonight is one painted of Dr. Osler in much earlier life and given to Lady Osler in recent years. It is now housed in the Osler library and has already been published in the *Johns Hopk. Hosp. Bulletin*, 1930, **46**: 79, by Dr. W. W. Francis, who gives the following interesting account of its origin:

When Osler was in London in 1885, giving the Gulstonian Lectures, he evidently dropped into the studio of his friend H. S. Tuke, who painted this sketch of him in oils. It is dated March 2nd of that year. Osler probably forgot all about it, for it was not until 1927, eight years after his death, that it came to the knowledge of his family. It was then sent to Lady Osler by the artist with the explanation that it had been in his sister's possession all these years.

Tuke, who died recently a famous artist, was the son of the well known alienist, Daniel Hack Tuke. The Tukes had been friends of the Oslers in Falmouth before Osler's parents came to Canada. Osler had stayed with them in 1872 on his first visit to England. The future artists's sister, then aged 9 years, had, like all children, lost her heart to Osler, so much so that thirteen years later she had appropriated this portrait and kept it.

II

Osler's Legacy to Posterity

O say not he is dead; . . . . . .
. . . . . .
. . . . . the dear philosopher,
Master and friend and pillar of the frail,
The true knight seeking ever for the grail,
The great soul, of great souls the interpreter

His torch was lighted at the infinite
And steadfast will remain. If men could lose
The genius of his work, if Time could dim
The vision pure that ever sought the light,
If death could kill the spirit and refuse
Immortal life—then might we weep for him.

—From "William Osler."
Obituary poem by *Marian Osborne*.

It is now nearly eighteen years since Sir William Osler died, and already a new generation has arisen among whom he was not personally known, and to whom an understanding of the extraordinary influence for good which he exerted upon the profession of his time, can be transmitted only through the delineation of his contemporaries or through his wealth of publications. This is the reason that great value is placed on such pen-picture reminiscences as those of Dr. Dock and others, and upon the portraits and other material records that remain to us of the physical and spiritual characteristics of the living man. Surely to strive to keep his memory alive in the hearts of the young leaders of the profession of tomorrow is the sacred duty of all those who were privileged to have been associated with him. Fortunate it is that his teachings as well as his wealth of clinico-pathological observations do live on in his writings, and thus make of his immense scientific and literary output for us a great inheritance. This truth is exquisitely expressed in the late Mrs. Henry Osborne's beautiful poem quoted above.

The time has indeed come to consider seriously methods for the conservation and transmission of his influence and for the diffusion of the ideals for which he stood. In this connection it is extremely interesting to learn of the action of a prominent American commercial firm, which has for the past three years presented annually to every student graduating from a recognized medical school in the United States a bound copy of his "*Aequanimitas and other Addresses*" in a new edition[2] got out by them for the purpose, with the permission and under the supervision of Osler's literary executors. This inspiring little volume, with its twenty-two Addresses delivered to " Medical Students, Nurses and Practitioners " between the years 1889 and 1905, contains between its covers the best that Osler had to give. Written in the simple language that clothes the eternal verities, with the impelling force of a great enthusiasm and the sympathetic insight into the aspirations and frailties of others that was his great characteristic, there sounds in every one of these Essays a clarion call to self-consecration to the ideals of his beloved profession. " Loyalty to the best interests of the noblest of all call-

[2] Aequanimitas and other Addresses. By William Osler, 3rd edit. Blakiston & Son & Co., Philadelphia, Pa. 1932.

ings," he wrote in his Preface to its Second Edition, " and a profound belief in the gospel of the day's work, are the texts, with variations here and there, from which I have preached." *

The value of such a gift, distributed to the youth of this country at the outset of their professional career, must be very great. It may well lead to a rekindling of the " divine afflatus " that his influence radiated with far-reaching results; and, as a practical means to this end, to the more wide spread organization of local student societies such as already exist in the " Osler Clubs " at London, England, at McGill University, Montreal, and at the Universities of Vermont, Alberta, Western Ontario and elsewhere. All the above are flourishing elective undergraduate bodies with graduate affiliations, functioning for the study of the history of medicine in general and the upkeep of the Osler tradition in particular.

The same object is being sought after within the profession itself in various ways. As examples of organization to this end may be mentioned the Triennial Osler Oration of the Canadian Medical Association, established in 1929 through the activities of its Osler Memorial Committee, delivered successively by the late Dr. F. J. Shepherd (represented by Dr. H. A. Lafleur) and Drs. Packard and Barker as its first three Lecturers; the annual Osler Oration of the Vancouver Medical Society, which presents to each of its yearly Orators in lieu of an honorarium a bronze plaque of the head of Osler reproduced from the famous Vernon Medallion made of him for Dr. H. B. Jacobs in 1903; and the Osler Pilgrimage to the scene of his early researches in Natural Science, inaugurated at Dundas, Ontario, under the auspices of the Hamilton Medical Society in February 1935, being the anniversary of the appearance of his first published article (*vide infra*). Of a more purely commemorative nature is the Osler Gold Medal of Oxford University, awarded triennially for the most outstanding contribution made to clinical medicine in that period, as also the undergraduate Osler scholarships established by the Canadian Medical Association at McGill Univer-

* The same thought inspired the late Dr. Grant Stewart of Montreal, under whose will, dated April, 1928, a specially bound copy of Osler's "*Way of Life*," is presented to every student of medicine at McGill University, at his entrance upon his second year.

sity and the Montreal General Hospital, these being the first institutions with which he was associated in his early academic career. The effort now being made for the restoration of the beautiful church at Ewelme, the roof of which has been entirely destroyed by the ravages of the death-watch beetle, is also to be regarded as a memorial, for this building with its neighboring Almshouse was the chief delight and the cherished responsibility of Sir William's Regius Professorship at Oxford, and it is now the repository of tablets to himelf and Lady Osler, and their only son, Revere. Under the caption " The Ewelme Osler Fund " an appeal is now being circulated bearing the signatures of *Harvey Cushing, Archibald Malloch, John Fulton* and *Henry Viets*, giving details of this historic foundation and asking that subscriptions to this fund be forwarded to Lady Osler's sister, *Mrs. H. B. Chapin* of Boston. This appeal is published in the *New England Journal of Medicine* for August 5th last; and a similar announcement in the September number of the *Canadian Medical Association Journal* gives the name of *Dr. W. W. Francis, Osler Library, McGill University*, for Canadian subscribers.

III

Biographic and Bibliographic Data and Personal Reminiscence

Many other Osler shrines and movements for the transmission of his influence must undoubtedly exist, especially in this country of the United States, where he is so much beloved and so deeply reverenced. I have enumerated above only those of which I happen to have personal knowledge, because, for such a Society as this, historical memorials have a very definite appeal and some such movements as the above might very well originate here or find support under your auspices. It is not, however, my purpose or function to particularize in this regard; but I propose, in presenting to you some aspects of his life and activities with which I am indirectly or personally familiar, to indicate certain undertakings of the nature of memorials which may arise or have arisen in these connections, and which will perhaps be brought to your attention later from other sources.

1. *Osler's Antecedents and his Boyhood in Upper Canada. The first Osler Pilgrimage.*

Our interest in the biography of any great man centres in the first place in his heredity and early environment. It is almost a platitude to remark that the higher type of intellectual and spiritual force that is germinated in those who are destined to become the supermen of the race commonly find its most fruitful soil, where the early formative years are passed under the simple conditions of a hardy pioneer life in some quiet country district, in a home where high standards and plain living prevail, and under the inspiring influence of some wise teacher or parent who has known how to throw open the Gate Beautiful and disclose to the clear vision of childhood the hill-tops of its ultimate aspiration. "*Es bildet ein Talent sich in der Stille.*" Osler himself, I believe, meant exactly this, when he thankfully acknowledged that he came into the world "in that best of all environments a country parsonage." The youngest but one of nine children, all of whom were born and brought up under the primitive conditions verging upon hardship of life on the borders of the uncleared Upper Canadian forest, the child of cultured, God-fearing, judicious parents and the youngest of six brothers, three of whom became distinguished in the legal and financial history of their country, his home surroundings were ideal for his evolution into what, to quote an early biographer, "Ontario claims as the most perfect flower of her cultivation." (*Gwyn.*)[3] Indeed, to gain a complete grasp of the special quality of his genius, his natural scientific bent, his fidelity to small duties and courtesies, his unfailing punctuality, his love of fair play, unselfish spirit and unbounded generosity, his subconscious integrity and sweetness of character and his deeply religious attitude, one must not only know the atmosphere in which his childhood and boyhood were passed, but even go back of this and enquire what manner of people were his parents and what was the stock from which he sprang.

William Osler was born on July 12th, 1849, of a good old Cornish family, whose members had been engaged in the shipbuilding trade

[3] The Early Life of Sir William Osler. By Norman Gwyn. In *Sir William Osler Memorial Volume*, 1926, p. 109. Published from the Medical Museum, McGill University, Montreal.

and naval activities for several generations. His father's elder brother, the " Uncle Edward " of whom he was so proud, deviated from the family tradition in that he studied at Guy's Hospital and became a surgeon and writer of repute, a member of the Royal College of Surgeons and a contributor to the *Philosophical Transactions* of that day. His father, the Rev. Featherstone Osler, with the love of the sea in his blood, enlisted at an early age and saw service off the coast of Malta, Algeria, South Africa, Brazil and the West Indies, rising to the rank of a lieutenant in the Royal Navy. Forced to retire from sea at the early age of twenty-eight in order to be near his aged father in England, he enrolled as a student at Cambridge, under preparation for the ministry of the Anglican Church. In the spring of 1837 he again turned from certain advancement in his new calling to respond to an appeal from Bishop Stewart and the " Upper Canada Clergy Society " and came out with his young bride to the then untrodden wilds of Northern Ontario as an ordained Missionary under the Church of England (Fig. 3a). His charge consisted of the parishes of Tecumseh and East Gwillimsbury lying northwest of Toronto in the vicinity of Lake Simcoe and on either side of the crossroads settlement of Bondhead where he built his Rectory, and it covered an area of 250 miles with a population of some 2,000 souls. In this wide area and beyond it to the north where no other missionaries were stationed, this intrepid young clergyman, travelling entirely on horseback, established no less than twenty-eight congregations and Sunday-schools, himself built eight or ten churches and assisted in the building of as many more, and carried on divine service at intervals in twenty different townships, with the help eventually of a number of young men, six of whom he took into his home at a time and trained for ordination to the Anglican ministry.[4] In all these activities he had the unfailing support of his devoted wife, whose charm and positive force of character, so clearly revealed in the beautiful portrait of her presented here (Fig. 3b), contributed in no small measure to his success.

After nearly twenty strenuous years in this Tecumseh district,

[4] Records of the Lives of Ellen Free Pickton and Featherstone Lake Osler, Printed for private circulation. *Oxford Univ. Press*, 1915, pp. 28-38.

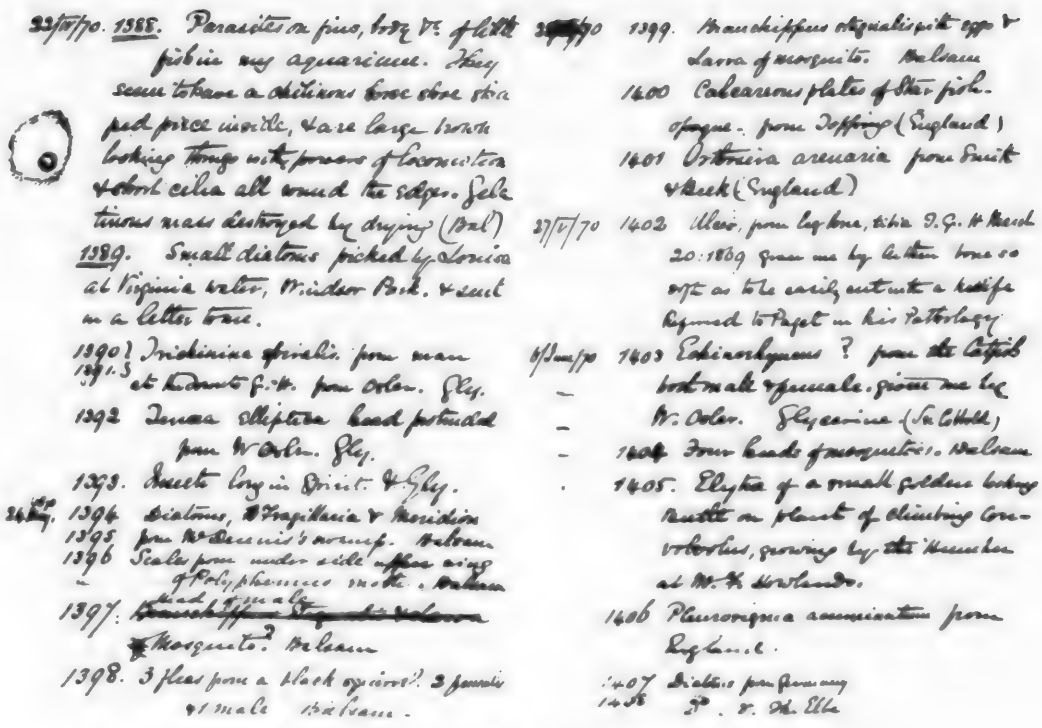
Fig. 3a.

Rev. Featherstone Lake Osler, 1805-1895, Father of William Osler.

Fig. 3b.

Ellen Pickton Osler at the age of 76, 1806-1907, William Osler's Mother.

the Rev. Featherstone Osler was transferred, to meet the educational requirements of his growing family, to the charge of the Parish of Dundas, a flourishing little town a few miles from the city of Hamilton, containing some 3,000 inhabitants, where there was an excellent grammar-school. Here the rougher life at Bondhead was superseded by the more settled social existence of a typical English Rectory, " a gardener's pride " indeed, situated close to the picturesque Desjardins canal and Dundas Marsh and commanding a lovely vista of the distant hills and forest slopes. At this time Sir William was a little boy of nine, and seven happy school years followed, first at Dundas and then at Barrie, where the first seeds of his love for natural science seem to have been sown by the head-master, " old Checkley," a friend of his father and of " Father Johnson." He was sixteen when the first big opportunity of his life came to him, for in that year, 1866, by a happy combination of circumstances, he was entered as a pupil at the Trinity College School at Weston, an institution recently organized by a group of men of high ideals and educational standards along English public school lines. Here it was that he came under the influence of his first great teacher, the Rev. William Arthur Johnson, a scholarly man of fine literary taste, a lover of boys and a trained naturalist of the White of Selborne type. Johnson had come out with his father, a retired Colonel of Wellesley's army, some thirty years earlier (in 1832) as a soldier-emigrant to the wild Lake Erie shore, carrying with him what was at that day the rarest of all treasures, a microscope for the study of the fauna and flora of that unexplored region. Endowed with the gift of scientific imagination and with the power of awakening interest in the young generation about him, he was quick to recognize a kindred spirit, and speedily introduced the uses of his precious instrument to the young Osler, who must have stood with all his natural perceptions and aptitudes aflame, thrilled with the zest of discovery of the new world of wonders that had suddenly unlocked itself before him. At first only one of a group of schoolboys who on Saturday afternoons or other holidays followed the eager lead of this master-spirit in the search for polyzoa, minute plant life or fossil remains along the Humber river and in other chosen localities, Osler soon became recognized as the junior expert of the expedi-



22/10/90. 1388. Parasites on fins, body &c of little fishes in my aquarium. They seem to have a chitinous case obscure striated pierced in side, & are large brown looking things with powers of locomotion & short cilia all round the edges. Sometimes mass destroyed by drying (Vol)

1389. Small diatoms picked by Sonica at Virginia water, Windsor Park. & sent in a letter box.

1390 } Trichinae spiralis. from ham
1391 } at Edmonton F.H. from Osler. Sfly.

1392 Tenia elliptica head protruded from W Osler. Sfly.

1393. Ascaris long in Spirit. & Sfly.

24/10/90. 1394 diatoms, Navicula & Meridion
1395 from W Dennis's swamp. Balsam
1396 Scales from under side of leaves of Polygonum amphibium. Balsam
1397. ~~Head & Stings of Insects Balsam~~ Mosquito? Balsam
1398. 3 fleas from a black cat (one?) 2 female & 1 male Balsam.

25/10/90 1399. Branchipus ordinalis pupa & larva of mosquito. Balsam
1400 Calcareous plates of Star fish. from Jeffreys (England)
1401 Ophiocoma arenaria from Smith & Beck (England)

27/10/90 1402 Ulex, from leg bone, Edin. M.C. & Med. 20: 1809 given me by Luther Holden as to be easily entitled a knife figured by Paget in his Pathology

6/Nov/90 1403 Echinorhynchus? from the Catfish both male & female. given me by W. Osler. Glycerine (Sa Catfish)
" 1404 Four heads of mosquitoes. Balsam
" 1405. Elytra of a small golden beetle found on plant of climbing Convolvulus, growing by the Thames at W.H. Edwards.
1406 Pleuronectes communicatus from Leyland.

1407 Diatoms from Germany
1408 Sp. N. Ch. Ellis

tion, who helped in the exact notation and scientific classification of the objects found, and whose skilful fingers were trusted to grind down or otherwise prepare, by the manual methods then in use, the delicate specimens for microscopic examination. Traces of his activities in this regard remain in the entries in Johnson's annotated catalogue of microscopic preparations for 1866-67 (Fig. 4), which is now preserved in the Toronto Academy of Medicine.

Soon, however, there developed a closer personal intimacy, when Johnson shared with his young disciple the fruits of his literary and scientific studies, introducing him to the book that became of all others the inspiration of his subsequent life, the Religio Medici of Sir Thomas Browne; and, in the leisure of the holiday seasons, exploring with this beloved pupil the marshy region about Dundas and elsewhere for the various forms of minute animal and plant life that formed their special study. We may picture them on these red-letter occasions, as they scoured the country-side together, the high-strung Anglican prelate of advanced Tractarian views and the clear-eyed lad of seventeen, impelled by a common enthusiasm for the unveiling of Nature's secrets, and stirred by the same sense of profound reverence for the power of Nature's God. Johnson has related the story of these expeditions in his own Journals, which with his microscope and microtome and the two cabinets made by himself and containing his equipment and collection of microscopic slides, are preserved at the Toronto Academy (Fig. 5).[5] A single extract from these will suffice as an illustration:

> August 7th, 1867. Telegraphed to W. Osler at Dundas to meet me at boat at Hamilton. He was there and drove me to Dundas. . . . Went with Willy Osler to the Canal, where he showed me beautiful specimens of a polyp attached to the timber of the wharf. Its ova are those of cristatella mucedo; but I was unable to examine the beautiful cilia. I brought home, also, a large variety of Chara which grows in eight or ten feet of water.

With Osler however the results of these investigations did not end with an annotated catalogue of specimens or a carefully kept private journal! With him to see was indeed to record, but, having

[5] The Johnson Cabinets in the Osler Collection at the Academy of Medicine, Toronto, by Jabez H. Elliott, M. B. *Sir William Osler Memorial Volume*, 1926, p. 465. Published from the Medical Museum, McGill University, Montreal.

collection by W. Osler

Fig. 5.

Two Johnson cabinets now housed in the Academy of Medicine, Toronto, thrown open to show their interior and fittings and Father Johnson's microscope.

From a photograph in the possession of Dr. J. H. Elliott.

done this, to publish for the interest and benefit of others. Already on Christmas Day of 1868, while still a schoolboy, he found the material for his first published article in a solitary excursion made that wintry afternoon for biological material to the sunken water barrel near his Dundas home known as " Binkley's spring," when, from scrapings taken from its interior he identified no less than twenty-four species of diatoms and infusoria. The whole adventure is described in a charming little sketch which appeared two months later in a semi-popular magazine of the day.[6] In the following year also, 1870, now an undergraduate in the Toronto School of Medicine, he published his first important scientific article on the *Canadian Diatomaceae*.[7] In it a detailed description of the life-history and histological details of these minute structures is followed by a carefully classified list of 109 species grouped under 29 genera, all found by him in the vicinity of the Dundas Marsh and elsewhere. The help is here gratefully acknowledged of W. A. Johnson and Dr. James Bovell, that distinguished graduate of Glasgow University, who was the second great scientific influence of Osler's youth.

Another valuable contribution in this field entitled " Canadian Fresh-water Polyzoa "[8] describing the researches carried out by him with W. A. Johnson in the summer of 1867 and with Prof. Hincks of the University of Toronto in that of 1868 was not published until thirteen years later, in 1883. In the interval several shorter communications on allied subjects appeared, all on the same scientific plane.[9, 10]

I have dwelt at considerable length upon Osler's early researches in Natural Science because one cannot but feel that the knowledge

[6] Christmas and the Microscope. By W. Osler, Dundas, Ont. *Hardwicke's Science-Gossip; an Illustrated Medium of Interchange and Gossip for Students and Lovers of Nature*, Lond., 1869, v. 44.

[7] Canadian diatomaceae. *Canad. Naturalist & Quart. J. S.*, Montreal, 1870-71, n. s., v, 142-151.

[8] On Canadian fresh-water Polyzoa. *Canad. Naturalist*, Montreal. 1883, n. s. x 399-406. (Presented, Natural History Society, Montreal, Jan. 29, 1877).

[9] Supplementary note on Canadian fresh-water Polyzoa. *Canad. Naturalist*, Montreal, 1881, n. s., ix, 473.

[10] Biology notes. I. On a remarkable vital phenomenon observed at Lake Memphremagog; II. On the occurrence of Ophirydium versatile; III. On the distribution of Pectinatella magnifica in Canada. *Canad. Naturalist*, Montreal, 1883, n. s., x, 251-252.

Fig. 6.

Osler cairn erected by the Hamilton Medical Society at Dundas, Ontario in October, 1927, to commemorate his early studies of nature in this vicinity. Photograph by Dr. W. R. Jaffrey, Hamilton, Ont.

of them and a careful perusal of his two larger articles (both of which appear in his Collected Reprints, so are readily accessible) sheds as it were a search-light on his later career. Out of this eager pursuit of biological knowledge based on material gleaned from the swamps and meadows of his native heath, and carried on under the guidance of an experienced naturalist, whose own work bore the stamp of genius, he emerged an exact scientist, with a descriptive power of observed facts that has rarely if ever been excelled, and an analytical faculty that found its highest application in later life in the elucidation of the nosology of disease; and behind the figure of Osler, known to all the world as the greatest clinical teacher of his day, is seen that of the tireless research worker, whose joyous labours close to Nature's heart in that far off rural district, laid strong foundations on which he builded better than he knew.

This fact received open recognition from the profession in his boyhood home by the erection of a cairn (Fig. 6) near the Hamilton-Dundas highway, overlooking his beloved Dundas Marsh which bears the memorable words.

> ERECTED BY THE HAMILTON MEDICAL SOCIETY TO COMMEMORATE THE LIFE OF SIR WILLIAM OSLER, STUDENT, PHILOSOPHER, PHYSICIAN, WHOSE EARLY STUDIES OF NATURE IN THIS VICINITY LAID THE FOUNDATION OF HIS CAREER.
>
> OCTOBER, 1927.

The same Society, acting in conjunction with the Osler Memorial Committee of the Canadian Medical Association, celebrated its first " Osler Day " in February, 1935, as mentioned above. The proceedings began with a clinical programme at the Hamilton General Hospital and the Mountain Sanatorium, and an Address delivered at a public luncheon at the Royal Connaught Hotel by Dr. T. B. Futcher, who took as his subject Osler's well known dictum " *I desire no other epitaph than the statement that I taught medicine in the wards* "; and then culminated in a " Pilgrimage " to the scene of Osler's early scientific activities, to " Binkley's spring," now a cement horse-trough, its water content covered with a replica of the greenish scum that formed the subject of his earliest biological investiga-

tions; to the Marsh and Cairn, the Dundas Rectory, and finally to the locale of his first office as a practising physician in the present home of Dr. and Mrs. Bertram. Among the group were many of Osler's old friends and pupils: Drs. Camac of New York, Futcher of Baltimore, Williams of Rochester, N. Y., Parsons of Toronto, Parfitt of Gravenhurst, Francis, Abbott and Howard of Montreal, and others. At an informal dinner which took place in the evening at the McMaster University, under the joint Chairmanship of the late Dr. Campbell Howard of Montreal and Dr. Heurner Mullin of Hamilton, a resolution was proposed by Dr. Howard and unanimously carried to the effect that like " Pilgrimages " be instituted at triennial intervals to the various Universities with which Osler held official connection in the successive stages of his academic career.

If this recommendation is acted upon, the next " Osler Day " should be memorialized in Montreal in 1938.

2. *Osler's Montreal Period (1870-1884). The Osler Pathological Collections at McGill University and the Osler Catalogue of the Medical Museum.*

William Osler came to Montreal from the Toronto School in 1870, at the end of his second year in Medicine, and he graduated M. D. from the old Coté Street building of the McGill Medical Faculty in 1872. His youthful studies in Natural Science had already constituted him an experienced microscopist, so that from the beginning of his medical course the problems of parasitology and comparative pathology claimed his attention and led him early into a simple type of experimental work. Thus, already in 1870, while still a student at Toronto, he records two personal observations of trichiniasis [11] in subjects seen in the dissecting room, and recounts five experiments carried out by himself on two dogs, two rabbits and a cat, in an endeavour to procure transmission of the parasite, with success in the last case (a rabbit) so treated; and there was until recently an extremely interesting specimen [12] in his McGill Col-

[11] Trichina spiralis. (Extract from the Somerville Lecture on animal parasites, delivered before the Natural History Society of Montreal) *Canad. J. M. Sc.*, Toronto, 1876, i, 134-135; 175-176.

[12] This valuable specimen survived the McGill fire of 1907, but unfortunately disappeared recently from the Collection.

lection of the heart of a calf showing many cysticerci imbedded in the musculature, from an animal that had previously been fed under his direction with segments of a taenia solium derived from a human subject.[13] His early grasp also of human pathology is shown in the two case-reports published in his final year (1872) by " Mr. W. Osler " from the service of Dr. D. C. MacCallum. In the first [14] of these, the " gross and microscope features of the tumour " are skilfully described, and in the second,[15] the autopsy, which is undoubtedly his own, is reported with full details and histological findings in the classic style that characterized all his later work in this field. Significant also of this interest in pathology which remained a paramount one throughout his entire life, and of his instinct as a collector, was his choice and treatment of the matter for his graduation thesis. This was on the broad subject of " Pathological Anatomy " (selected by himself), and was illustrated, says the report in the *Canada Medical Journal* for that year, by " *Thirty-three microscopic and other preparations of morbid anatomy presented by the author to the Museum of the Faculty.*" It was awarded a special prize for originality of research at the Convocation held on March 28th, 1872. Unfortunately the manuscript has not been preserved.

In the two years of post-graduate study in Europe that followed immediately on his graduation, Osler's attention remained focussed upon the twin fields of physiology (which at that date, at least in England, was understood to include both histology and experimental pathology) and pathological anatomy proper. He worked on the former subjects under Sir John Burdon Sanderson in England, and on the latter in Berlin under Virchow, the acknowledged mastermind of the day, whose ardent disciple, both in autopsy-technique and in teaching methods, he became; and in Vienna under the great descriptive anatomist Rokitansky. He did not however confine his foreign studies to these two major interests. By the advice of his

[13] Cestode tuberculosis. A successful experiment in producing it in the heart of a calf. With A. W. Clement, veterinary student. Presented Montreal Vet. Assn. Jan. 19, 1881. Rept. *Am. Vet. Rev.*, N. Y., 1882, vi, 6-12.

[14] Carcinoma mammae. Removal by excision. *Canada M. J.* Montreal, 1872, viii, 107-109.

[15] Pleuro-pneumonia with delirium tremens. Death. Autopsy. *Canada M. J.*, Montreal, 1872, viii, 119-122.

friend and preceptor Dr. R. P. Howard, who maintained an active correspondence with his young protégé during this entire period, he followed also the great clinicians of the day, Traube and Frerichs, Murchison, Jenner, Wilson Fox and others in the wards, and took several courses in the minor specialties. Such studies were however at this period merely regarded by him as side issues, opportunities seized as they arose for the acquirement of a broader professional education, and were not allowed to detract from his concentration upon his great objective, which was a fundamental knowledge of *Pathology* in the broadest sense of the term. This was the rock upon which he all unconsciously was building, and which was to become to him as it were the gateway, through which, to quote the language of his own *Alabama Student*, he was "to reenter the world as a physician,"—the greatest of our time.

Osler returned to his home at Dundas, Ontario, in June 1874, and less than six weeks later the Medical Faculty of McGill University, which had watched his progress abroad with increasing satisfaction, offered him an appointment as Lecturer on the "Institutes of Medicine" (which term covered physiology, histology, and pathology). August, 1874, saw him in Montreal preparing his set course of lectures for the winter session, and the following year, on May 1st, 1875, on the resignation of his predecessor Professor Drake, he was advanced to the Chair of the Institutes of Medicine at the early age of twenty-five.[16] That year also the Faculty honored their young Professor by inviting him to deliver the Valedictory Address[17] to the new graduates of the School. This, his first attempt of the kind bears the marks of the writer's youth, and was not included by him in the *Aequanimitas* collection of such essays, possibly on that account; but it is extremely interesting as outlining the principles that dominated his life to the end and as formulating the ideals for the "Student Life" so beautifully devel-

[16] Dr. Langley Porter of San Francisco, formerly of Montreal, a nephew of the late Dr. Drake, informed the writer that his uncle, who retired on account of his health, told him he had purposely delayed his resignation from the Chair until the Spring of 1875, because the Faculty hesitated to appoint a young man, untried as a Lecturer, to the full Profesorship at the age of 24.

[17] Valedictory address to the graduates in medicine and surgery, McGill University. *Canada M. & S. J.*, Montreal, 1874-75, iii, 433-442.

oped in his later contributions. That year also, 1875, he published his classic study on Coal-miner's Lung,[18] based on a number of personal autopsies (from which the specimens are preserved as treasured features of his McGill Collection), and an interesting series of experiments carried out upon kittens on the distribution of India ink pigment introduced by the lymphatics. A few months later appeared his first important clinical contribution consisting of a set of papers on haemorrhagic and other forms of smallpox,[19] the result of observations in his service in that Department of the Hospital, and of his own experience with the disease. In October, 1877, in his Introductory Address [20] to his class he included a complete prospectus of the course on microscopic technique he was about to deliver, with instructions for the use of the Hartnack microscopes, supplied by himself at his own expense for the use of the students from funds earned by him through his appointment to the charge of the smallpox ward of the Montreal General Hospital. This outline was amplified later by him into a complete laboratory manual on " Normal Histology " of 63 pages, which may be considered his first textbook (Fig. 7).

It was on May 1st, 1876, that an event took place which can only be described as epochmaking in its influence both upon Osler's career and upon the future development of medical science on this continent. This was his appointment to the newly-created post of Pathologist to the Montreal General Hospital. In the eighteen months that had elapsed since his succession to the teaching staff of the Faculty, he had doubtless performed many post-mortems at the request of his colleagues, upon whom this office up to that time had devolved. Now, however, this activity, which had heretofore been a privilege or a courtesy, had become both his duty and his official right, and he plunged into its exercise with all the vigor and devotion of an enthusiast. One of his first acts was to systematize the work of the students both by securing their regular attendance at

[18] On the pathology of miner's lung. *Canada M. & S. J. Montreal,* 1875-76, iv, 145-168.

[19] Notice of the recent researches on the pathology of small-pox. *Canada M. & S. J.,* Montreal, 1875-76, iv, 341-343.

[20] Introductory address at the opening of the forty-fifth session of the Medical Faculty, McGill College. *Canada M. & S. J.,* Montreal, 1878, vi, 193-210.

DEPARTMENT OF INSTITUTES OF MEDICINE McGILL COLLEGE.

STUDENTS' NOTES.

I

NORMAL HISTOLOGY

FOR

LABORATORY AND CLASS USE.

BY

WM. OSLER, M.D.,

MEMBER OF THE ROYAL COLLEGE OF PHYSICIANS, LONDON; FELLOW OF THE ROYAL MICROSCOPICAL SOCIETY, LONDON; PROFESSOR OF THE INSTITUTES OF MEDICINE McGILL UNIVERSITY; PHYSICIAN AND PATHOLOGIST TO THE GENERAL HOSPITAL, MONTREAL.

MONTREAL:

DAWSON BROTHERS, PUBLISHERS.

1882.

Fig. 7.

Title-page of Osler's first laboratory manual for students' use.

all autopsies and their assistance in the performance of these in small groups, and by the organization of demonstration courses held every Saturday upon the entire material of the week, the organs from each case being carefully preserved together, and the whole series presented, after the method of Virchow, in a sort of colloquium with free examination and discussion of the specimens, and the help of all available data, both histological and clinical. Notes were kept by Dr. R. J. B. Howard who acted as demonstrator. These courses which were held throughout Dr. Osler's period at McGill, rapidly became extremely popular, and many reminiscences of them have been published, both in Dr. Harvey Cushing's " Life," in the Sir William Osler Memorial Volume and elsewhere.

In the performance of the autopsy, Osler instituted from the beginning a careful technique, identical with that outlined by Virchow in his " *Sectionstechnik*," then *de rigueur* among pathologists of his school. An essential feature of this is the orderly inspection of the cadaver and its organs and a detailed report dictated from notes made on the spot during the post-mortem which was performed under Osler's personal supervision by the students detailed by him to work upon the case. His reports were inscribed, in most cases in his own clear flowing hand, in a bound autopsy book provided for the purpose. During the years that elapsed between his acceptance of this post and his departure in 1884 for Philadelphia, he performed in this way nearly 1,000 autopsies, the reports upon which filled five volumes. Two of these have come down to us and are preserved in the Historical Museum of the Medical Faculty, along with his Pathological Collection itself. Every student of his life should inspect their pages, for the quality of his genius is writ broad upon them; and his reports are classics of their kind, which for accuracy of description, simplicity and sincerity of style, elucidation of essentials, omission of all irrelevant data, and a certain vivid interest in the facts presented, can hardly be surpassed.

One immediate product of this activity was the publication of his two Pathological Reports. The first [21] of these is a small bound volume of 97 pages, containing 70 of these reports with clinical ab-

[21] Montreal General Hospital pathological report for the year ending May 1st, 1877, vol. 1, Dawson Brothers, Montreal, 1878.

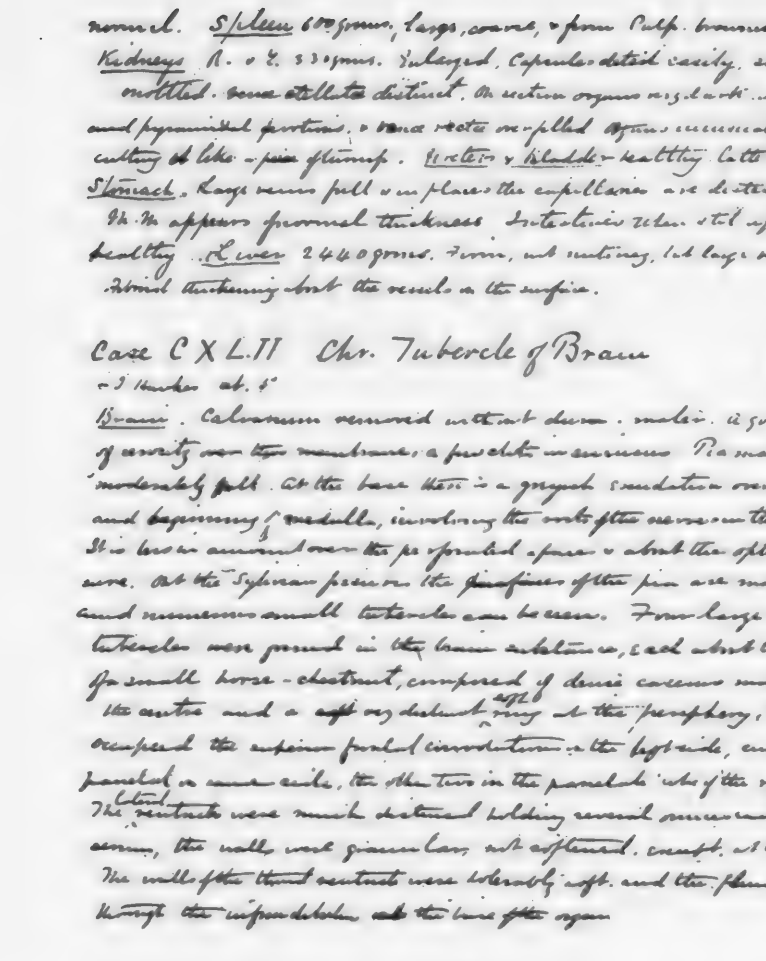


Fig. 8.

Holograph page from Dr. Osler's first autopsy book at the Montreal General Hospital.

stracts attached, grouped in series and selected on account of their interest from the 100 autopsies which he performed between May 1st, 1876, and May 1st, 1877. These selected reports first appeared in the current number of the *Canadian Medical and Surgical Journal* for 1876, and were doubtless reprinted from this for their presentation under a single cover. This was the first book that Osler saw through the press. It has an interesting dedication " *To my Teacher, James Bovell M.D.*" of " *This first Pathological Report from a Canadian Hospital* "; and the title-page bears the inscription " *Pathology is the basis of all true instruction in clinical medicine.*" His Pathological Report No. II presents reports of some 50 cases of special interest selected from 225 autopsies which he performed in the two years between October 1877 and 1879; it does not, like the first, form a separate book, but is embodied in a larger, more ambitious volume [22] edited by Osler himself and containing as well a number of articles by various members of the Hospital Staff. His " Pathological Report No. III," giving a list by title only of the balance of 786 autopsies he performed at the Hospital since his appointment to it as Pathologist, was not issued by himself, but was published some ten years after he left for Philadelphia by the late Prof. Wyatt Johnston.

This large pathological experience followed by him with such intense interest, formed the chief source, at least in this period and probably later, for Osler's immense productivity along clinico-pathological lines. For the great majority of his observations made in the wards and deadhouse came to publication later either as separate articles or as supplying the starting point for some investigation that was consummated only in his later years; while the exact knowledge so acquired supplied the very basis and substratum of his great Practice of Medicine. Time does not permit me to particularize further on this fascinating aspect of our subject. What does concern us here however is the fact that Osler was throughout his life, both in his scientific and literary work, a *collector*, and at no time in his life did he pursue this activity more zealously than now in con-

[22] Montreal General Hospital Reports; Clinical and Pathological—by the Medical staff. Edited by William Osler, M. D., M. R. C. P. (Lond.), 1880, i, 369 pp. Dawson Bros., Montreal, publishers.

nection with his beloved field of pathology. In almost every autopsy his keen eye discovered some objective evidence of disease of scientific importance, which he seized upon as specimens for demonstration before the Medico-Chirurgical Society, and thereafter for preservation in the cherished Museum of the Faculty. In his time he must have added at least five hundred such specimens to that historic collection, many of which were of permanent value. Unfortunately, some of these disappeared or " went bad " after he left and their number was substantially reduced after the McGill fire of 1907, in which a complete clearance was made of the osteological and gynaecological collections. However, practically all specimens of the circulatory, respiratory and digestive systems, which contained the most interesting part of his material, were salvaged and there are at the present time 141 " Osler " specimens in good preservation on the shelves of the Medical Historical Museum. Practically all these were the subject of published studies or articles and bear the signs of his handiwork in their dissection or chiselling down to show the lesion, so are an asset of incalculable biographic value.

In the year 1899, the writer was appointed to the Curatorship of the McGill Museum. Immediately thereafter I proceeded with the identification of the older historic specimens, many of which had parted with their labels, and with the elaboration of a detailed descriptive catalogue on a plan of collaboration with clinicians or experts on the various sections of the material. The whole won the approval of Dr. Osler, who visited the Museum several times in the summers of 1904 and 1905, and who saw with delighted enthusiasm his beloved specimens, records to him of past achievements, restored and described. He insisted upon being permitted to assist in the raising of funds for the publication of this extended descriptive catalogue among the Governors and friends of McGill. This he did to the extent of some twelve hundred dollars, a part of which was expended on the Section of the Haematopoetic organs [23] which he himself saw through the Oxford Press in 1915, but a balance remains in trust here for the same purpose.

[23] Descriptive Catalogue of the Medical Museum of McGill University. Part IV: Section 1 The Haemopoietic Organs. Edited by Maude E. Abbott, B. A., M. D., Curator. *Clarendon Press*, Oxford, 1915, 196 pages.

The volume on the cardio-vascular system was of special interest to Dr. Osler, for the reason that it contains the most valuable part of his Collection, including as it does the material from his Gulstonian Lectures on Endoca. ditis, bicuspic aortic valve, etc., and his large series of aneurysms.[24] This section of the catalogue was intended indeed to be the *magnum opus* of the entire undertaking, and its manuscript had the benefit of his personal revision and warm approval. Its completion was interrupted however by the McGill fire and it still awaits publication. It is hoped that this event may yet be brought to pass in the not too distant future, for it presents a source-book of original clinico-pathological observations of great value, which should become the possession of the scientific world.

3. *Philadelphia (1884-1889)* and *Baltimore (1889-1904). Osler's Literary Output and the Classified Bibliography of his Publications.*

Osler was thirty-five, when, in the summer of 1884, he accepted the professorship of clinical medicine in the Medical Faculty of the University of Pennsylvania, at that time considered the " premier school " or " *civitas Hippocratica* " of the continent. His ten years of intensive labor in the wards and deadhouse of the old Montreal General Hospital surrounded by his enthusiastic students, must have bred in him an instinctive consciousness of his growing powers as a clinician; so that he entered upon this wider and relatively untried field without trepidation, secure in his gospel of the day's work and with only a natural regret at the parting with his friends and the uprooting of old connections. In his new environment at Philadelphia pathology still remained his first love, as the records of 162 autopsies [25] performed at the old Blockley Hospital attest, as do also the flood of pathological specimens and other communications presented by him before the Pathological Society of Philadelphia in the same period. Nevertheless, his official functions here were no longer

[24] This material was discussed at some length in an Address on " Osler's Contributions to Heart-disease " delivered before the History Section of the College of Physicians of Philadelphia, February 12th, 1934.

[25] The Pathological Records of the Old Blockley Hospital. By H. R. M. Landis, *Sir William Osler Memorial Volume*, 1926, p. 232.

in this field of pathology, but were clinical and educational, and they brought with their exercise a larger experience than any he had yet known; and Philadelphia itself, with its Infirmary of Nervous Diseases, its Orthopaedic, Pennsylvania, and General Hospitals, its great Library of the College of Physicians, its journalistic facilities and above all, in the noble wife whom he won there, in the person of Lady Osler, played its own important rôle in preparing him for the turn of the wheel that brought him into his own as the executive head of the greatest medical clinic of North America. Chosen by its organizing committee to take this distinguished part in the formation of the new School of Medicine of Johns Hopkins University, Dr. Osler rose during the fifteen succeeding years of his stay at Baltimore, as scholar, author, educationalist and above all as a great clinician and clinical teacher, to the height of his career.

His immense literary output, which reached its peak during these years, may best serve as the measure of his achievement. It was this thought that inspired Miss Minnie Wright Blogg, then Librarian of the Johns Hopkins Hospital, to conceive the brilliant idea of the publication of a complete Chronological Bibliography [36] of all his publications to appear in the July 1919 number of the *Johns Hopkins Hospital Bulletin*, being the anniversary of his 70th birthday. Its appearance was greeted with a storm of delight by his friends, as well as with immense pleasure by himself, and shortly thereafter it was revised by her with index and frontispiece as a book, and in this form ran through several editions.

Six months later, on December 20th, 1919, the sad news of Sir William's death at his home at Oxford of septic pleurisy flashed round the medical world. It was in the following spring of 1920, some four months after this tragic event, that the writer, who in connection with her work in the McGill Museum had long been engaged in an exhaustive study of Osler's publications during his Canadian period, and had a practically complete set of transcripts or references of these in her possession, prepared at the suggestion of Lt. Col. Fielding Garrison her "Classified Bibliography of his

[36] Bibliography of the Writings of Sir William Osler, *Johns Hopkins Hosp. Bull.* 1919, 219-233. By Minnie W. Blogg.

Canadian Period " [27] for publication in the obituary number of the *Canadian Medical Association Journal*. This was divided in consultation with Dr. Garrison into twelve rubrics, which were later consolidated into the following, *Natural Science*; *Comparative and Human Pathology*; *Clinical Medicine*; *Literary Papers*; *Medical Education*; *Public Welfare*; and *Volumes Edited*. Under these divisions the several items were arranged under successive years in their chronological order. The result was illuminating from the biographical standpoint, and several years later it was decided, with the kind permission and cooperation of Miss Blogg and with her assistance and that of several other collaborators to prepare a Classified Bibliography [28] of his entire publications for appearance in the Osler Memorial Volume of the International Association of Medical Museums which appeared in 1926. Special care was taken in it to block all references to the same article published in different places in a single paragraph, and to distinguish original publications from items reported for him, such as pathological specimens presented or reports of discussions, thus making it possible to calculate with a fair degree of accuracy his relative productivity in different fields at different periods.

The type of the Sir William Osler Memorial Volume has been distributed, but reprints of this Classified Bibliography, which is considered by many the most valuable feature of this book, are being prepared and will be available shortly for distribution at cost from the publishers.

4. *Oxford Period (1904-1919)*

As Regius Professor of Medicine of Oxford, William Osler returned at last to the home of his fathers and the " Open Arms " at 13 Norham Gardens became at once the Mecca for the profession

[27] Classified bibliography of Sir William Osler's Canadian period (1868-85). *Canad. M. Ass. J. Special Osler Memorial Number*, 1920, July, 103-123.

[28] Classified Bibliography with Annotations of the Publications of Sir William Osler, Bart., F. R. S. etc. (1869-1921). Based on the Chronological bibliography by Minnie Wright Blogg. Compiled, augmented and annotated by Maude E. Abbott, Minnie Wright Blogg, E. B. Krumbhaar, and Archibald Malloch. Edited by Fielding H. Garrison and Henry W. Cattell. *Sir William Osler Mem. Volume*, 1926, pp. 471-606.

of the Western world. It was indeed a remarkable fate that brought him in the closing years of his well rounded life to this centre of the Humanities, where through his acute historic sense and enthusiasm as a collector he could best complete his life studies on the origins of scientific medicine in intimate contact with the older European centres of thought. As a result we have his great "Bibliotheca Osleriana,"[29] the Osler Library itself, housed under his Will at McGill University, the home of his most beloved books and incunabula. The receptacle too of his ashes, and adorned by a replica of his bust, through which we may imagine his astral self peeks,[30] enjoying the delight of the kindred souls who assemble to feast upon his treasure trove, that carries within itself the pledge of his immortality and the secret of his undying youth. This after all is his greatest of all memorials to which we trust the coming generations will turn for inspiration throughout the ages yet to be.

The writer's thanks are expressed to Dr. W. W. Francis for information kindly given, and to Dr. Elmer Belt for the reproduction of the Seymour Thomas portrait. Acknowledgment is also made to the "Life of Sir William Osler" by Harvey Cushing, which is a gold mine of biographical information.[31]

[29] Bibliotheca Osleriana. A Catalogue of book illustrating the history of Medicine and Science. Collected, arranged and annotated by Sir William Osler, Bt. and bequeathed to McGill University. Clarendon Press, Oxford 1929, 785 pages. Edited by W. W. Francis, R. H. Hill and Archibald Malloch.

[30] Burrowings of a Bookworm. By Egerton Y. Davis (William Osler). Unpublished paper, quoted by W. W. Francis in *Bull. Johns Hopkins Hosp.* 1930, *46*: 82.

[31] *The Life of Sir William Osler*, By Harvey Cushing, 2 vols. 8°, Clarendon Press, Oxford, 1925.

REMINISCENCES OF DR. WILLIAM OSLER AT BLOCKLEY HOSPITAL AND WORKING ON THE TEXT-BOOK.[1]

GEORGE DOCK, M. D.

Pasadena, Calif.

I have mentioned in the Memorial Volume the subjects noted above, but from occasional enquiries I find that certain details are not understood. The chief source of difficulty is that men wonder how and why a medical chief would have to make his own autopsies in a large municipal hospital. The explanation is rather complex. Most hospitals in 1880 did not have the thorough organization that we now strive for. Blockley was no exception. There was a pathologist, but I think no resident pathologist, and no special understudy. Typhoid fever was extremely prevalent, and often fatal. All kinds of acute and chronic diseases, including tuberculosis, were well represented in the wards. Dr. Osler came on duty in the late summer (of 1887) and immediately took up his Blockley service with characteristic enthusiasm. No one at that time knew as much about typhoid fever as he did. He went over all the cases with the greatest thoroughness, and his ardor communicated itself to internes and others who had time to follow the ward work and rounds. The typhoid patients, and all others with fever, had the blood examined for malarial parasites, giving additional interest. Dr. Osler was often requested to see patients in other services, especially those with vascular or nervous diseases. Some of all these classes, of course, would die and the house staff knew Dr. Osler's interest in autopsies. We did our work in the afternoon, getting through the clinical part about four o'clock. Then we would go to the dead house to see what was there. At that time the official pathologist, Dr. Henry Formad, who was also coroner's physician, was very busy about the city, and rarely appeared at Blockley. So without any special planning that I can recall, Dr. Osler took charge of the autopsies. His

[1] Remarks made in the Discussion of an Address on "The Influence of Sir William Osler. A Personal Reminiscence," by Maude E. Abbott, delivered at Pasadena, Calif., Dec. 3rd, 1936.

experience at the Montreal General Hospital had made him a facile prosector. Not long before he came to Philadelphia he spent some time in Leipzig with Cohnheim's staff and especially Carl Weigert and Karl Huber. Huber had done important work on heart infarct in which Dr. Osler was interested. Dr. Osler would begin with what seemed the most important case, aided by a member of the house staff. He did the section with great thoroughness, calling attention to interesting findings as they appeared, and at the end wrote the protocol in the same orderly fashion, so that as H. R. M. Landis tells in the Memorial Volume, page 235, "These autopsy protocols are distinguished for their clearness of description, and though rapidly recorded need little or no alteration." Sometimes there would be two autopsies, and then usually a younger man would begin on one, but Dr. Osler never failed to see that all the work, including the record, was complete.

In the spring of 1891 I spent a week as Dr. Osler's guest in the John Hopkins Hospital. He had rooms in the internes' quarters, and I was given the room of an interne away on vacation. As there was no formal teaching then, Dr. Osler was able to devote a great deal of time to work on the Text-Book. He had been given the use of a large room on the ground floor, with a desk, a couple of plain tables, and an old bookcase. The tables and bookcase were filled with books, and there were piles of books on the floor. These had been sent over from the Surgeon General's Library and gave Osler all the material he needed. I remember he mentioned that the books formed a large wagon load. At the time I was there composition was already well advanced, and especially the chapters on typhoid, malaria and dysentery. I discovered that visitors who had any interest in a particular subject were asked to read the manuscript on such subject. As I was quite familiar with the three topics named, I was given the sheets of the several chapters and asked to go over them thoroughly. Needless to say I found very little to revise. The method of work was very interesting. Dr. Osler was an early riser and he began before breakfast, sometimes soon after six o'clock. For the work on hand, he had the top of the desk covered with the volumes he wished to consult. If there were more such volumes than the desk would accommodate they were placed around, open at the

page needed, on piles of books or even on the floor. Dr. Osler had a theory that floors were not used by most people as much as they should be. He was perfectly familiar with the volumes in use, and could pick up the one he wanted without loss of time. After breakfast his secretary, who became well known to patients and friends as Miss Humpton, would come in, and either take dictation or type sheets from the longhand manuscript. So the work continued several hours each day. There are many photographs of this workroom in existence, and I know of no more appropriate places for preserving them than medical libraries.

THE TRADITION OF ANCIENT BIOLOGY AND MEDICINE IN THE VITALISTIC PERIODS OF MODERN BIOLOGY AND MEDICINE *

PROFESSOR ADOLF MEYER
Hansa University, Hamburg, Germany

1. The subject, which I have undertaken for this lecture, is as follows: all vitalist systems, which have been propounded since the foundation of modern natural science in biology, are a renaissance of ancient natural science, arising out of the stagnation of modern natural science in mechanism. Or more shortly: vitalism is Aristotelianism.

It goes without saying that all vitalism is a reaction against mechanistic thinking, but its close relationship in spirit to the ancient natural science is less well known. At any rate, and this is of special importance to our subject, it is not generally realized that modern natural science is not identical with mechanistic natural science, even when it thinks unvitalistically. Mechanistic natural science is only the degenerate form of modern natural science.

Further, mechanistic natural science is not identical with mathematical natural science. This identification is mostly taken for granted, for example by all authors who are of the opinion that a mathematical biology makes demands which cannot be satisfied. J. S. Haldane lays aside mathematics as a useless instrument for the new biology. In his opinion it is useful only for the more primitive necessities of cognition in physics.

In our discussion we have to make clear the following questions:

1. What is vitalism?
2. What is the character of modern natural science?
3. What is mathematical natural science?
4. What is mechanistic natural science?

But because, as we assert, all vitalism has its roots in the ancient learning, we must also answer the question:

5. What is the character of ancient natural science?

* Prof. Meyer's paper was read before the Baltimore-Washington Chapter of the History of Science Society, in Baltimore, on October 28, 1935. We publish it as a specimen of a philosophic trend that is becoming increasingly popular in Germany today—(*Editor*).

Then, in conclusion we must consider the question of whether modern organic natural science must always live in the swing between the opposite poles of mechanism and vitalism or whether a synthesis between them, and superior to both, cannot be found.

The questions, chosen here, are also of great interest to the history of medicine. The history of biology has always run closely parallel to that of medicine. What in biology is called vitalism and means "back to Aristotle," in medicine is called "Hippocratism" and is always treated as "a back to Hippocrates" movement. To-day, in Germany, we stand in the middle of such an epoch in the history of medicine. The problem has been formulated by Lieck thus: Doctor or Specialist? This means that medical science, degenerated into the mechanistical, can only cure, when it thinks back to the great, immortal rules of the doctor's art, which were formulated first and never better in the Corpus of Hippocrates.

2. Now we will turn to our first main problem. What is the character of the ancient biology and medicine of Aristotle and Hippocrates?

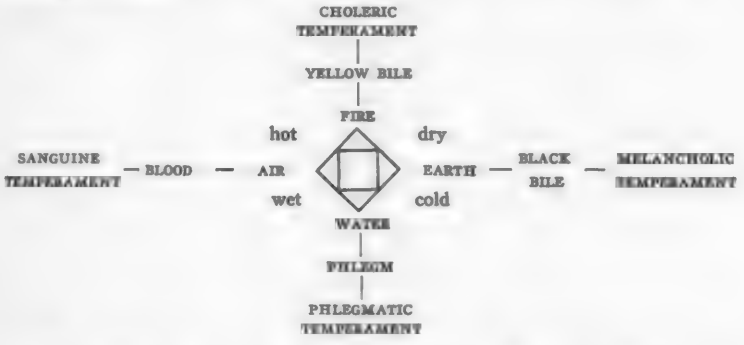
In the West the study of Nature as science, which was spontaneously sought out from philosophic motives, was first created by the ancient Greeks. If we take the ancient science of Nature as a whole in the history of science, as is proper, we shall not misunderstand its sense, greatness and meaning any more than when we see it only as a more or less primitive fore-runner of the study of Nature to-day. It was no one's fore-runner any more than it was any one's follower. It was, is, and always will be just itself and has, within its set frame, attained as fully to the heights of the ideal of knowledge, which it worked out and followed through for itself, as any system of knowledge has ever done. The West has never again brought a philosophical program to such completion. The cosmos of the ancient knowledge reveals itself as one with the ancient Art in "noble simplicity and quiet greatness" in the eyes of those who have learnt to see it in the true perspective of two thousand years. Therefore, to describe the character of ancient natural science and medicine in their completeness, we need a guide to reveal to us the essential in the Greek way of handling these matters. This we find when we inquire into the ideal of knowledge which the Greeks fol-

lowed. This is the only true scale by which to measure historical questions " in the antique."

The scale which we have sought, to estimate classical antiquity or the ideal of knowledge of this whole epoch, is Plato's doctrine of Ideas. It is the most complete statement of what classical antiquity expected and wanted from knowledge, and it forms the program of knowledge, which all philosophers and students of Nature in ancient times understood or artlessly approved of, and which each of them in his own special field tried to realize. The most complete creation of learning which antiquity produced was the so-called Euclidean Geometry. It best makes clear the meaning of the program of knowledge of the doctrine of ideas. All the axioms and definitions compiled by Euclid are real Platonic ideas. How could it be otherwise than that this complete science built up on axioms is not the personal creation of Euclid, but only joint result of the compiled mathematical study of the academy of Plato noted down by Euclid. The theorems of Euclid are a knowledge of ideas, and the whole system of Euclid is nothing more than the true representation of the mathematical part of Plato's Heaven of Ideas. Picture to yourself any definition of Euclid, such as that of the circle as the content of all those lines of which the points are always at an equal distance from a given point. The circle, so defined, is a Platonic idea, the ideal original form—original phenomenon (Urphänomen) Goethe would say—of all real possible circles. Each of these, however finely and cleanly it is drawn with the compass, is only a feeble reflection of the ideality of the circle of Euclid. Just as the mathematical relationship to reality is only a shadow of pure mathematics, so in other spheres of reality, Platonic ideas exist as ideal forms. All knowledge will be cognition of ideas. The sense, value and purpose of the ancient study of Nature was to find in their divine perfection the Ideas which were the original and ideal forms of the ordinary—to the Greeks only " apparent "—reality. So Plato and his followers studied mathematical ideas (Euclidean Geometry), Aristotle the organic, psychical and qualitative physical ideas, the medical schools of Hippocrates and Galen the clinical ideas and Archimedes especially the static ideas. We will consider a little further their connection with ancient biology, in order to bring out

more clearly the common character of this thinking. This thinking is given direction by the desire to realize the world in rest and eternal fulfillment, in other words, by the idea of the Cosmos. This conception of truth has three main characteristics: its thinking is static and finite, making use of qualitative categories. What is infinite and dynamic is shunned, and the mere quantitative does not count as real science.

Static and finite thinking is especially characteristic of ancient mathematics, which were geometry and mechanics. But most characteristic of the ancient attitude toward Nature, especially toward the organic world, is the doctrine of qualities. The combination of analysis and inductive observation so vital to modern natural science, to the mathematical, measuring sciences, was aimless to the Greeks. Ancient physics and biology produce a pure doctrine of qualities. The accompanying diagram will make the character of ancient natural science quite clear. The actual doctrines of several ancient students of Nature and philosophers are here welded together into a united system.



The qualitative natural science of antiquity distinguished between three groups of four fundamental qualities, four fundamental elements common to all real things, four specific organic elements and four special psychical characters. All three groups are so related that the then common elements are contained latent and eo ipso in the then special elements. The organic elements also contain the common elements, and the psychical characters contain the organic

and common elements. We meet this " Enkapsis " again and again in ancient theories. According to Aristotle, for instance, the vegetative souls of plants are contained in the more complex souls of the animals and these again in the rational souls of men. Examples will make this clear.

The four common elements are Earth, Water, Air and Fire, each of course standing for the corresponding state of aggregation. The Earth is the fundamental element of all that is firm, Water of all that flows, Air of all that has the form of gas, and Fire of all that has the form of the etheric and pneumatic culminating in the soul. Each real object contains all these fundamental elements, one of them dominant, or so to say phenotypically obvious, the three others latent, with the potential capacity of becoming dominant under other conditions. The phenotype then dominating is the result of a static equilibrium in which all four elements are submitted to given conditions from outside. The chemical combination known to us as H_2O, for example, is such a combination of the four fundamental elements, which phenotypically can show each element dominant. According to given conditions it appears as ice (— earth), as water (— water), as air (— steam) and as fire (— very hot steam). We also commonly make a distinction between visible and invisible steam, without usually thinking that visible steam is really no longer gas. Invisible steam provides the best illustration of the fire element for its heat is the only quality by which it is perceptible to us. The event of earth passing over to fire, in which the static stages of water and air are passed through, was called by the Greeks rarefaction, and the opposite process, condensation. But we must observe that these events were not at all meant as dynamic in the modern sense, but as pure qualitative changes of state, in which only the elementary stages as such have any real meaning. For, only that which has a static and qualitative equilibrium is real to the Greeks.

Beyond these four common fundamental qualities, the organism possesses four specific organic fundamental elements or " humors," namely the black and the yellow bile, the phlegm and the blood. Many people have puzzled over what exactly is meant by these humors; but the solution seems to me to lie quite close at hand. The knowledge that " the blood is a special juice " is an age old

possession of all human races, the primitive as well as the civilized. But the blood, as long as it is living, is a harmonious mixture of all the four humors of the Ancients. If you leave a glass of freshly drawn blood standing for a day, then it divides into the four known humors as its elementary qualities. At the bottom appear the black cakes of blood, the " black bile " of the Greeks, above comes a yellow liquid, the pus-factor of the blood, the " yellow bile " of the Greeks, and above that is a phlegm clear as water, which is identical with the phlegm of ancient terminology. The fourth humor, the " blood," is just the proper living mixture of the organic fundamental qualities. Why these humors are called " bile " is easy to explain, when one knows that the Ancients, especially their greatest physiologist Galen, were of the opinion that the liver had the special function of producing blood. We shall come back to this doctrine later. These four humors also form the four organic fundamental elements, out of which each organ and each organism is in the last resort formed. Where these four humors are properly mixed, that is to say, when they are in harmonious static balance, the organism is healthy. But where one humor is too strong, definite illnesses arise. Think only of the rôle played by the pus, or yellow bile, in countless inflammations and wounds. In a qualitative treatment of Nature it must seem then that the yellow bile, a substance which in normal organisms never becomes obvious, is playing too big a part in these processes. The doctrine of the four humors forms the groundwork not only of the ancient physiology, but also of the Hippocratic clinics, which on this basis achieved a wonderful system of prognostic clinical pathology. The consistency of the different organs can be explained by the combination of the humors with the common elementary qualities. The blood possesses the common elementary quality " water " and with it the four properly mixed humors as we have described above. Bones and flesh (muscles), on the other hand, have the common elementary quality of earth, and are besides statically and harmoniously pulsed through with blood or its special humors. Each flesh or bone wound reveals their inner relationship to the blood.

Corresponding to the four humors as the final organic elementary qualities are the four temperaments as the four commonest funda-

mental characters of psychical behavior. Each outward manifestation of the soul is as a whole the manifestation of one of these four temperaments. Of course—an exact correspondence to each one of the four humors is intended—in each soul slumber the four temperaments, three existing potentially, while the fourth is "phenotypically" dominant. This is then the expression for the harmony, the equilibrium or the state of rest of the said soul, which as such shows every time the "right mixture" of the temperaments. Because of the wonderful perception, which ancient psychology had for the typical (the "Ideas" of Plato) and for the character as the fundamental phenomenon of the soul, it was completely free from the formless conceptions of the being of the soul, as it is represented in modern association-psychology, for which the soul is only a chaotic bundle of experiences and conceptions. The four temperaments are vitally related to the four humors. While a heavy surplus of one of the four humors over the others leads to definite physical clinical appearances of disease, quite a small surplus of one of the four humors is enough to assist one or other of the four temperaments to come out on top phenotypically. A slight surplus of the black bile calls out the melancholic temperament. Therefore the melancholics see all that goes on in the world through gloomy eyes and black is the colour of sadness. A slight surplus of the yellow bile calls out the choleric temperament. Therefore we still speak of a person going yellow with anger. So almost all our terms for psychical occurrences can be traced back to the ancient doctrine of temperaments and the four humors. That which appears, when there is too much "humor" in the blood (water or phlegm), displays the phlegmatic temperament. Therefore Shakespeare characterises his Falstaff, the prototype of all phlegmatic people, as a man with too much "humor" in the blood, which means too much liquid or water. Therefore it should never be said that Falstaff is a humorist in our sense of the word. A surplus of blood itself makes a sanguine temperament.

From what has been said, it is quite clear that the qualitative treatment of Nature of the ancients produces a whole, rounded off and complete in itself, through which we can look deep into the physical, organic and psychological spheres of reality. Without a

doubt this approach to Nature has a biological, psychical direction at bottom. In biology, medicine and psychology its strongest synthetic capacity is shown, while physics in comparison comes off rather badly, seeming really only a hanger-on of biology, from which it derives its philosophic meaning. This whole picture of the world is now carried over into a doctrine of evolution—static of course, not dynamic—of unusual greatness and beauty. I mean the philosophy of the organic which has never been equalled since, and in which Aristotle's study of Nature built round and finished off Plato's philosophic doctrine of Ideas. The Metaphysics of Aristotle gives the last touch to the ancient picture of Nature.

Each real thing built up out of elementary qualities as we have described, appears in this cosmological view even more plainly as a living whole of " form " and " matter." Or one may use the Greek words *Hyle* and *Eidos*, the idea of the thing and the material, in which it was more or less incompletely embodied. " The stamped form which envelops it during life " " according to the law under whose order it is." The meaning of Aristotle's Metaphysics is most clearly and beautifully expressed in these words of Goethe, who once more after Thomas Aquinas and Augustine, welded together in his picture of Nature the worlds of Ideas of Plato and Aristotle and added modern dynamic thinking to them. Each real thing is such a " stamped form," the stamping agent is the " Idea," the Eidos or the Energeia-On, the stamped substance is the Hyle or Matter, the Dynamei-On, whilst the law, under whose orders they are, corresponds exactly to the principle of Entelechy of Aristotle. According to the stage of the embodiment of the idea, the said object is a physical, organic or psychical being. The more intensively the material is permeated, the higher is the stage of evolution of the said object. In inorganic things the weight of the material quashes the transformation which is aimed at; but in organisms the mass of material which has been used is insignificant compared with the formative processes through which it has passed. Think only of the lungs where comparatively insignificant material is so shaped as to display the greatest possible surface. In organisms each achieved form is always the material for a still more complex formation. All organs and systems of organs are encaptically contained in each

other. The mere material becomes less and less important and the permeation by the idea becomes more intensive. In purely psychical structures, even the organically essential, permeated material (nerve substance) can scarcely be called " matter." So all objects in the world are arranged in steps in a universal, organised evolution which is qualitative and intensive. It is a scale, at the bottom of which is pure matter which merely makes the creation of form possible but is without power of its own to bring this about, and at the other end of which is God, the highest and purest form or idea, expressing himself in all matter. Further, because each object has not the power to reach a higher state of permeation either from below or from its own self, but only by means of what the form next in rank to it can create, so it follows that God as the highest and purest form is the " final mover," the creative principle by whose grace all that exists is. So Plato's whole hierarchy of ideas is concentrated in the idea of God. But while Plato distinguished sharply the world of ideas as the true reality from the apparent world of empirical existences, Aristotle succeeded in co-ordinating the world of ideas with that world of the real into one tremendous symphony of evolution. The ancient ideal of knowledge, which was revealed programatically in Plato's doctrine of ideas, was brought to final completion in Aristotle's philosophy and natural science, which were founded on biology. To this the ancient world and the Middle Ages, in which all ideas on natural science were derived from the ancient, could add no new principle. Here physical, organic, medical-clinical (Hippocrates-Galen) and psychical reality were brought to a unity, more complete than has ever been attained since. In Aristotle the soul is not a really superfluous accompaniment to proper, robust reality, as it seems to be in modern mechanistic and materialistic systems, but is the necessary, organic coping-stone to the whole building. The soul is really the entelechy, the creative idea working in the organism. As such the vegetative soul works in plants and directs the " vegetative " functions of nourishment and reproduction, whilst the animal soul of the animals, which of course encaptically contains the vegetative soul too, conducts the " animal " functions of sense-experience and motion. Above the two, related encaptically to them, come the rational soul of men and the intuitive soul of God.

This is enough to give an outline of the ancient conception of Nature, which is orientated through and through by biology. In nothing is this a primitive fore-shadowing of modern Nature study, but a picture of the world self-contained, of wonderful ripeness and completeness, which can never unfortunately be surpassed in its kind. Its main characteristic is static, qualitative and finite thinking and its fundamental intuition is the idea of the cosmos, the world eternally unchanged and at rest, complete in and through itself. This can be best described as a universal morphology.

Since the end of the Middle Ages and since the modern picture of the world was formed, the ancient picture of the world has never been dead in history, but still less has it been, in its real being, incorporated into the modern study of Nature. It rather lives on, as everything lives which has had the power of shaping history, in a thousand forms and symbols inside modern natural science. Its tradition is just as important in natural science as in so-called cultural science. Especially helpful and salutary is it, even if only in a provisional and propaedeutic way, when modern natural science gets stuck up a blind alley of cognition. In such a crisis vitalism came into modern biology. Wherever vitalism has appeared, it has never been anything else than a renaissance of Aristotle's biology, just as the medical scholars have, with or without knowing it, raised the cry, "back to Hippocrates," as the maxim of medical art. Remember Sydenham and in our days, August Bier, whilst the most significant vitalists of Aristotelian stamp were Stahl and the Epigeneticists in the 18th century and are now Driesch and v. Uexküll.

3. We will now mention a few examples of this after-life of ancient biology, especially the Aristotelian, in the vitalist systems of modern biology and in the closely allied renaissance of Hippocratic medicine in the "vitalist" period of modern medicine.

Since the foundation by Galileo and Harvey of modern natural science, which is essentially a mathematical natural science, and modern medicine, which is correspondingly natural-scientific, there have been up till now three important vitalist periods. The oldest vitalism is represented by Thomas Sydenham (1624-1689) and Georg Ernst Stahl (1660-1734). The second vitalist episode in modern natural science appeared in the famous struggle over evolu-

tion or epigenesis. Driesch is right when he states that all Epigeneticists were vitalists. The most prominent names in this epoch were Caspar Friedrich Wolff (1733-1794), C. F. Blumenbach (1752-1840) and especially Johannes Müller (1801-1858), in whom the whole pre-Darwin biology and medicine culminated. He is the only modern student since Aristotle with something of Aristotle's greatness. The third and last epoch of vitalist revival is that in which we are now and of which the greatest figure is undoubtedly Hans Driesch. Now we must show that all these vitalist episodes were really revivals of Aristotelism and Hippocratism.

The oldest of the three vitalisms, that of Sydenham and Stahl, is easy to describe. It begins in Thomas Sydenham quite frankly as a Hippocratic reaction against the growing up of the then mechanistic natural science, known as Iatromechanics. Its typical exponent was Giorgio Baglivi (1668-1707). According to his theory, the organism was a "box of tools." He explained the teeth as scissors, the stomach as a bottle, the intestines and glands as sieves, the veins as pipes, the thorax as a pair of bellows, the heart as a pump and so on. The muscles possess, according to him, a tonus which sets all these instruments in function, that is to say, sets them in motion. If this tonus is normal, then the organism is healthy, but if it is increased or lessened, then the organism is ill. But his clinical practice was in startling opposition to his own theory. Baglivi himself stressed the point that one could not found a medical practice on this theory. He passed for an eminent doctor and had no illusions, recommending adherence to the tried methods of Hippocrates. "May the doctors at last come to their senses, wake out of their sleep and see the great difference between the stout old medicine of the Greeks and the speculative, uncertain medical science of the moderns." But while Baglivi's clear-sightedness as a doctor did not hinder him as a theorist from holding fast to Iatromechanics and even from pushing it to its conclusion Thomas Sydenham, the greatest doctor of his time, who died while Baglivi was still a student, was recommending his students to throw overboard the plunder of Iatromechanistic theories, and in medicine not to theories at all, but at every point to go back to Hippocrates. Sydenham followed out a pure "Phenomenology" of illnesses and classified them according to their typical characters, their "symptomata essentialia and accidentalia," just as Linné later

classified plants and animals. That was the true Hippocratic spirit. We described the ancient science finally as universal morphology. This was what Sydenham tried to realize inside pathology, namely, a typological morphology of pathological appearances.

Corresponding to Sydenham in England there was in Germany the medical scholar Stahl in Halle. As Sydenham led the doctors back to Hippocrates, so Stahl in biology gave back to the soul the chief place in the household of the organism, as Aristotle had done. In his "Theoria medica vera" Stahl begins to consider the insuperable opposition between the notions of organism and mechanism. What distinguishes an organism from a mechanism is shortly the possession of the soul. As for Aristotle the soul, the Eidos, was the creative idea, maintaining and directing all organic functions in the organism, so for Stahl was the soul the organising, vital principle of the organism. The organism is not only there for the sake of the soul, but it only exists through the soul. But the being of the soul is, just as in Aristotle, activity:—God as the "first mover" and the soul as the entelechy working in the organism, the secondary mover. Therefore, "it is never often enough repeated, that the ground-work of life is activity, not matter, and more exactly activity not in matter, but in relation to matter: for matter in itself is only passive and indifferent to all activity, and simply obeys the distribution and coördination to some form or structure. Bear this in mind." If the organism after death falls into physiochemical disintegration, it is only because the soul has left it—the soul whose task it was, during life, to oppose the activities of these destructive forces. "La vie est l'ensemble des fonctions, qui résistent à la mort." Thus did Stahl's great French pupil Bichat formulate this doctrine later on, and in much the same way Claude Bernard, the most significant French physiologist, still later defined Life. From this doctrine came a very fruitful and pliant pathological theory. The original causes of illnesses are always some failure of the soul functions in the organism. It is plain that this is a much more biological idea of the nature of illness than the mechanistic tonus-theory of Baglivi. So we see that the fate of the first mechanistic caricatures of the new mathematical natural science of Galileo and Harvey, called iatromechanics in biology, was in the 17th and 18th centuries the same as that of mechanistic biology to-day. Hippo-

cratism and Aristotelianism (Vitalism) even then restored organic reality from its mechanistic degeneration to its original nature.

The second vitalist period in modern natural science is bound up with the famous struggle over evolution and epigenesis. The epigeneticists are the vitalists of this epoch, while the evolutionists follow the mechanistic ideal of cognition, although in their philosophy they were often frankly Deists, like Haller for example. But, because it was then usual to hold to the doctrine of creation, a mechanistic idea of organic life did not necessarily lead to a materialistic attitude towards the world.

Biological thinking came into a new position through the discoveries in embryology. Leeuwenhoek, Swammerdam, Malpighi, Bonnet, Needham, Haller, Wolff, Réaumur, Trembley and Spallanzani had, in the 17th and 18th centuries, collected a great mass of embryological facts. The three last scholars had discovered also the closely related appearances of regeneration. But facts without theories are unthinkable. Just as one cannot discover the simplest fact without being lead to it by a theory, so, on the other hand, one cannot produce a theory without bringing facts to support it. Consequently, with these new embryological facts, new theories were produced, actually two new theories: that of evolution and that of epigenesis. The evolutionists were of the opinion that that which appears to exist after an evolution, is really only an unfolding of that which existed before in the same multiplicity and organisation. Between the grown organism and its first seed is only a difference of size and not of stage of evolution. Evolution is growing larger, nothing more. This idea was common to all evolutionists. They differed only in that one group saw the finished organism in miniature in the ovum cell (Ovulists), and the other group saw it in the sperm cell (Animalculists). For the Ovulists, the spermatozoa are only agents to evolution, while for the Animalculists, the ovum cell was only a reserve for food.

Against this mechanistic theory of embryogenesis the epigeneticists, whose attitude was vitalistic, asserted that in embryogenesis not only an increase in size or growth takes place, but also a climbing from step to step in the scale of evolution. Each later embryonic stage is also more complex in structure and function. It is not even

worth discussing whether the ovum and sperm cells are only miniature editions of the adult organisms. From stage to stage there takes place an intensification and differentiation of the organisation. Therefore, as the embryogenesis is every moment developing from a less organised system into a more highly organised system, a creative vital force must exist, which watches over this progressive rising in the scale and true creative evolution. For, of course, the then lower stage of evolution cannot produce the higher by its own force. For, if that were possible, then the higher stage would be at least contained latent in the lower, and one could no more speak of higher and lower, but only of equivalence more or less latent and of organisation more or less manifest. All true epigeneticists believed in the actual rise in the scale during embryogenesis, in a real creative evolution.

Thoroughly Aristotelian is the fundamental idea of all epigenesis, that the rise from a lower to a higher stage of biological organisation during embryogenesis cannot be spontaneous, but rather is achieved with the help of a specific vis vitalis (vis essentialis, nisus formativus, specific energy). Entelechy plays just this part in the system of Aristotle. Here, too, a higher stage of organisation cannot be reached from a lower spontaneously. On the contrary the impulse and the strength for each step up comes rather from the higher stage of organisation. In Aristotle all creative power comes finally from the "first mover," which is the most complete of all realities.

So all epigeneticists end up at last in Aristotelianism. Up till now no one of them has gone further than Aristotle in his last principles, not even Hans Driesch. This is as true of C. F. Wolff as it is of Blumenbach and Johannes Müller. There are in the main two paths of thought which they follow to arrive at Aristotle.

The first of these two paths starts from the opposition between organism and machine. This theme was the starting-point for Stahl. And it is too for C. F. Wolff. But while Stahl is content with putting Life in sharp contrast to the Machine and with defining Life as that which works against death, that is the purely machine forces, Wolff approaches the same problem with an effort to reconciliation. He does not deny that much machine force is active in a healthy organism without destroying it. The organism is filled with

mechanisms and the problem is only: "How do Life and Machine co-operate in the organic body?" Unfortunately we have no time to follow out his proof, we must be content with his results. They can be concentrated into this formula: the machine serves the organism; it is an organ created by it for the purposes of Life. "Bodies in the grip of evolution are not machines. . . . The evolving substance is to be distinguished from the machine, by which it is enwrapped. But the machine should be looked upon as its product." Consequently the final producer of all machines, the organism, cannot be itself a machine. This cognition has lately been very trenchantly described as follows: There is no Machine-theory of Life, but a Life-theory of the Machine. Somewhere and somehow each machine is incorporated into the life process of its creator. This essential function, by which all machines are made, is called by Wolff "vis essentialis." Here Wolff revives the entelechic world of ideas of Aristotle, only dressing it up in the intellectual garment of his time.

By another path the vitalist thought of Blumenbach and Johannes Müller also ends up in Aristotelianism. From the work of Stahl and Wolff it follows that there must be vital functions, which can be in no way derived from machine or inorganic functions. An attempt was now made to define these functions as purely empirical, without trying to give them a metaphysical explanation. Haller, the evolution-theorist, had already started on this in the sphere of functional physiology. He had recognized such autonomous vital functions in irritability and contractibility. Bichat, the founder of Histology, had then added the secretion as further organic modality. Blumenbach then raised the number of modals to four: contractibility, irritability, sensibility and the nisus formativus. The last is for us the most interesting because it has to do with the making of the form, and with nourishment and growth as well as with the eventual regeneration of the organic formation. Its chief field of work is of course embryogenesis. The nisus formativus is characterised as an "effectus quidam perpetuus sibique semper similis," and more exactly as a "peculiaris vis corporibus organicis vivis connata et quamdiu vivunt perpetuo actua et efficax." Blumenbach devoted to the nisus formativus a special little pamphlet, "Über den

Bildungstrieb," " On the Impulse to Formation " (Göttingen 1781), the first work of theoretical biology written in German. Here he is emphatic that the nisus formativus is a constant and active common organic force of Nature, equally important in principle with the known physical forces of gravitation and attraction. " The word nisus formativus ought, like the words attraction, gravity, etc., to be used no more and no less than to signify a force, the constant activity of which is known through experience, but the primal cause of which, as of the known, even well known forces of Nature, is for us a qualitas occulta." Blumenbach then shows many examples—galls, pathological appearances, restitutions — to prove that normal epigenesis, like the appearance of regeneration, cannot be explained without reference to the nisus formativus. Organic life experiences too many surprises for all to have been pre-arranged. Therefore organic evolution is not evolutionary but only epigenetic.

In the theoretically restrained, more empirical and inductive manner in which Blumenbach handles his problems, the connection of his thought with Aristotle's is less obvious than in Wolff. But it becomes plain when we follow to the end the trend of biological thinking which he inaugurated. This culminates in the doctrine of Johannes Müller of " specific energy," which is the most complete exposition of Aristotelian thought since Aristotle. A logical path leads over Haller, Blumenbach and many of their contemporaries to Johannes Müller, and reaches here its highest point.

The autonomous biological modals of Haller and Blumenbach are nothing other than " specific energies " in the sense of Johannes Müller. We know this fundamental idea of Müller's biology to-day from his law of the " specific energy of sense organs." Each sense-cell reacts to any sort of stimulus which it meets, presuming that it takes any notice of it, only with its own proper " specific energy." A retina cell, for example, answers to all stimuli which it meets, whether a mechanical blow on the eye, a chemical or electric stimulation of the optic nerves, exactly as it answers to its normally accessible optical stimuli, namely with sensations of light and colour. In the doctrine of Johannes Müller the " specific energy " was in no way restricted to the sense cells, but was rather a quite common attribute of all organic substances. Each cell has its specific energy proper to

itself. So the muscle-cells react to all calls upon them with contraction and expansion only, and the fertilized ovum-cell only with embryogenesis, whether it is set going by a sperma-cell or by the butyric acid of Jacques Loeb. Now it is quite clear that the biological modals formulated by the forerunners of Johannes Müller are only collections of definite groups of specific energies. Sensibility represents the specific energy common to all sense cells, contractibility is the form of specific energy special to all muscle-cells, and further the nisus formativus is the specific energy of all sex-cells and all organizers, etc. So all doctrines of autonomous biological modals culminate in Johannes Müller's principle of specific energy.

Johannes Müller was the most deliberately Aristotelian scholar of his time. He did much work on Aristotle; there is, for instance, his famous research into the "flat shark of Aristotle." From his students comes the best edition so far made of Aristotle's biological works. So it is not surprising to find that his "specific energy" is nothing more than the old Aristotelian idea of energy in a form suitable to his time. Aristotle termed Energeia-On these forms which after fully unfolding from their original, potential existence (for example the seeds of corn), come into full possession of the functions and energies of their adult existence. But this is also the nature of the "specific energy" of Johannes Müller. All that has been added in the meanwhile is the knowledge of the specificality of these energies in the different organic systems. The two ideas of energy acquire their proper significance only when taken together with the other fundamental ideas of the theoretical biology of Aristotle, in the first place with the principles of potency and entelechy, as we have seen in the above description of this system. So this second great vitalist epoch in modern natural science is really nothing else than an always spontaneous renaissance of Aristotelianism.

The same holds true too of vitalism to-day. It too, like its forerunners, grew out of work on embryological problems. However, modern mechanism wears quite another look from that of its evolutionist fore-runners. No modern mechanist would oppose the idea that the process of embryogenesis is of an epigenetic nature; he would only insist that the forces and energies, by which the epigenetic

process of embryogenesis takes place are of a purely physio-chemical nature. This attitude is most clearly expressed in the evolution-mechanics of Wilhelm Roux, especially in his theory of mosaic evolution, and in the deterministic doctrine of Weismann. According to the theory of Roux, each cell coming into being in the embryogenesis has its own pre-determined task, which it pursues blindly without troubling itself actively about the whole. It would do exactly the same in isolated cell-tissue culture (Roux's famous frog experiment). Weismann had already before Roux postulated the same mechanical determinism for the corpuscles of the sex cells which he called determinants and which correspond to our genes to-day. In the terminology of modern genetics the embryogenetic theory of Weismann and Roux would be translated as follows: the genom as a whole is nothing other than the passive result of the activities of all the genes and the embryogenesis as a whole is therefore nothing other than the passive result of the activities, already determined by the genes, of the organizers, which follow each other in closely determined sequence. This attitude is obviously similar to that of the old theory of evolution. Only, in modern evolution-mechanics, the germ-cell is not a mere photograph in miniature of the grown organism, but its closely deterministic, causal transformation and translation into another biological co-ordination-system.

This idea is opposed by modern vitalism, especially in the experiments of Driesch. Neither the embryogenesis nor the appearances of regeneration and restitution can be understood as the mere results of the activities of blindly active organizers. The whole is not the passive result of the organizers, but their " vera causa " and their active creator. Such things are known well enough; we are interested in the part played here by the argument of vitalism. In one word, this is again Aristotelian. In order to explain rightly the mechanistically distorted facts, which he refuted by experiment, Driesch revived the classical fundamental ideas of Aristotelian biology. The " prospective potency " of Driesch corresponds logically to the potency of Aristotle; the " prospective significance " of Driesch is Aristotle's idea of energy—cf. here what Johannes Müller said—and the entelechy of Driesch, especially in its later form as

psychoid, is an exact copy of the Aristotelian psychoid. The second great vitalist of our time too, J. v. Uexküll, who in his general thought comes nearer to Plato than to Aristotle, is, in his most important new principle, the function-cycle, travelling in the tracks of Aristotle. J. v. Uexküll himself stresses the identity of this idea with the principle of specific energy of Johannes Müller, and this we have already proved to be in the spirit of Aristotelian biology.

Following on the vitalism of to-day, Hippocratism has been again revived in medicine. The Sydenham of our day is August Bier, the famous surgeon of the University of Berlin, who has written a series of essays on the philosophy of medicine, of which the refrain is: back to Hippocrates! Such facts are well known. As the result of our comparative treatment of the history of vitalism, we can now reiterate that: All vitalism is essentially a renaissance of ancient biology (Aristotelianism) and medicine (Hippocratism).

From this comes its strength and the life-force by which it lives on in the history of science, but from this, too, comes its weakness. For the mere renewal of something, which has already flourished earlier, can have an enlightening effect in later times of crisis, but is never the way out of the crisis itself. So it happened to the past movements of vitalism and such will be the fate of vitalism to-day, that of preparing the way for a more powerful movement, coming after, which can already be perceived. It is my opinion that the new ideal of natural-scientific cognition, *Holism*, which has come into being in different cultural centres of the earth and in different countries simultaneously and spontaneously, that Holism will bring new blood into natural science, which has been damaged by mechanism and repaired in the emergency by vitalism. Arising out of the cognitive necessities of biology and psychology, Holism is going to conquer physics, which, in the words of Planck, cannot go further without thinking in totalities, and spur on mathematics to new, great achievements, which will not be less significant than the infinitesimal calculus inaugurated by modern physics. I think the time is not far distant when J. S. Haldane's prophecy, made in 1907, will come true: "That a meeting-point between biology and physical science may at some time be found, there is no reason for doubting. But we may confidently predict that when that meeting-point is found,

and one of the two sciences is swallowed up, that one will not be biology."

So I would point out that the philosopher and systematic theorist is about to take the lead away from the historian. In conclusion we will go back to the five problems which we stated at the beginning. Two of them, the questions of the nature of ancient natural science and medicine and of modern vitalism, we have discussed in passing, because they formed the proper theme of our lecture. But the other three questions have also been answered by implication. Here are the results.

First comes the question: What is the nature of modern natural science, when it is neither mechanism nor vitalism? The answer is: Modern natural science is mathematical natural science. Bacon's well-known prognosis of inductive natural science describes only a symptom of modern natural science, and moreover one which was not foreign to ancient natural science in its best Aristotelian epoch. But the idea of mathematical natural science is quite novel to ancient science. It represents the "wholly new science of age old things" which Galileo created when he summarized the nature of its methods of research as "measuring what can be measured and making measurable what cannot be measured." In this spirit Galileo invented dynamic mechanics, which Newton perfected in his "Principia mathematica philosophiae naturalis." In the same spirit Harvey created modern biology, when he applied Galileo's principle of making measurable what could not be measured to the study of the circulation of the blood and refuted the old purely qualitative theory of Galen on this point. The same spirit lived in Lavoisier, when he brought measurement in the form of weighing into chemistry, and, in doing so, made modern scientific chemistry out of the old, qualitative alchemy. Again, by the standards of the new mathematical or measured natural science, it was an inspiration, when Gregor Mendel turned calculation and measurement to the solution of the purely biological problems of heredity and so found his famous laws. Kant formulated plainly the real cognitive ideal of this modern natural science, when he said of its prototype, the Newtonian physics, that, "in each science, there is only so much true and proper science, as there is mathematics in it."

Modern natural science is neither mechanistic nor vitalist, it is mathematical. In these fundamental theories of modern natural science—apart from mechanics as it is treated by Galileo and Newton, where this form of the problem has no point—the result is never to relate the phenomena back to mechanistic fundamental processes, neither in Harvey, Lavoisier nor Mendel. They must be mathematicized, but they are not mechanised too. Mathematically natural science and mechanistic natural science are not, as is often taken for granted, one and the same. On the contrary, mechanistic natural science is only the degenerate form of modern mathematical natural science. And this is the answer to our other outstanding questions too. Always, when it becomes mechanistic and encourages the relating back of natural phenomana to the fundamentals of mechanics, the modern study of Nature gets up blind alleys, grows stagnant and degenerates. Then vitalism must always come, as we have seen, to refloat the grounded ship. Because, by its very nature, it is based on ancient natural science, which was neither mathematical nor mechanistic, it neither could nor can help modern natural science to build itself up again on its own foundations, after it has been damaged by mechanism. Vitalism is in itself not modern natural science—just because it belongs to the ancient science—but it is the good helpful doctor which cures modern mathematical science, when it has caught the mechanistic disease again. Cured, modern natural science must set out with new strength and new methods on its destined way of the mathematizing of Nature.

But to-day it stands at a turning-point in its history, already rich in crises. The relationship between mathematics and natural science has become a problem in itself. Its destiny wavers between the enthusiasm of the philosophers for the idea of mathematical natural science, and the scepticism of the physicists, who try to realise it in their daily work. The Italian philosopher Orestano, who is quite convinced of the mission of mathematics for the natural cognition, formulates the chief problem of a "new philosophy" as follows: "Why is mathematical calculation such a finely organised and reliable instrument of research, that neither senses, intellect, imagination nor reason can be compared with it?" The theoretical physicist Bridgman is much more sceptical. He has contested the

usefulness of mathematics for natural cognition at every point. "This idealised view of the connection of mathematics with nature could be maintained only during that historical period when the accuracy of physical measurement was low, and must now be abandoned. . . . There is no longer any basis for . . . the view that our imperfect knowledge of nature is responsible for our failure to find in nature the precise relations of mathematics. It is the mathematics made by us which is imperfect and not our knowledge of nature. . . . The concepts of mathematics are inventions made by us in the attempt to describe nature. . . . In other words, the problem is to make our equations correspond more closely to the physical experience at the back of them; it evidently needs some sort of new invention to accomplish this." To-day it is especially from biological experience, collected in great masses, that there comes the desire for mathematical theorising. A new mathematics directed to organic thinking, is necessary for this. It lies hidden in the theory of transcendental numbers—one thinks of the biological significance of the number "e", which is not less than that of the number "i" in theoretical electricity—and in the dynamic geometry of the sinus-line.

If mathematics succeeds in supplying this need, then the idea of mathematical natural science has come triumphantly through a severe crisis, which imperilled its very existence. But if it does not succeed, then modern "mathematical science" will die away like its ancient sister, and at best, as she, be born again when its successor, following another ideal of cognition, needs to be rescued from a crisis. But I believe in a new and great triumph of mathematical thought.[1]

[1] My thanks for the translation are due to Miss Evelyn Francis, B. A. Oxon.

THE DRAMATIC LIFE OF ORÓBIO DE CASTRO

AUGUSTO D'ESAGUY, M. D.

Isaac or Balthasar Oróbio de Castro,[1] forgotten by Prof. Silva Carvalho when he outlined his *History of Portuguese Medicine*, is not entirely unknown to us. Several historians and scholars, among them M. B. Amzalak, Ribeiro dos Santos, Mendes dos Remédios and Maximiano de Lemos, have dealt with his life and works, and have striven to clear the horizon which hides from our view the most bitter aspects in the restless life of this remarkable metaphysician.

Nineteenth century historians lend him two nationalities, or rather, consider him an Iberian, placing him now in Portugal now in Spain, a country which quite unfairly claims to be the cradle of all the famous Jews born in Portugal, therefore Portuguese.[2]

M. B. Amzalak, the investigator who has studied Oróbio's life in detail, declares he "*was born in Braganza, of Marrano parents, about 1620, and died on the 7th November 1689, which corresponds to the Hebrew date of the 1st of Kislev, 5448.*"

Don Isaac Oróbio de Castro had two sons: the physician Moseh Oróbio de Castro and Abraham Oróbio de Castro, and one daughter, Rebecca.

He openly returned to the faith of his fathers in the year 1666, at a time when the religious policy of the Peninsula was bordering on insanity, that blind insanity which was later to have such disastrous effects on the economic and scientific life of Portugal.

Students of medical history will doubtless be moved by the dramatic inner life of this Marrano who embraced the ancient faith when his faculties had ripened, and his spirit, losing all doubt, acquired that serene limpidity which his books reveal.

Oróbio was born when the Spanish yoke was heaviest in Portugal and the study of medicine was in decadence on account of the country's isolation from the rest of Europe; the peculiar isolation

[1] Vid. Joseph Rodriguez de Castro, *Biblioteca Española*. The Royal Gazette Press, Madrid, 1776; Augusto d'Esaguy, *Un notable medico Iberico*, Ars Medica, Barcelona, February, 1930; reprinted in Revista de la Medecina y Cirurgia de la Habana, March, 1930, p. 205.

[2] Manuel L. Ortega, *Los Hebreos en Marruecos*. Madrid, 1929.

of the XVIIth century, which brought about a pronounced mental crisis that made itself definitely felt in the XVIIIth.

Medical studies must perforce have suffered as a result of this isolation, their most important factor being a regular interchange of conclusions. In a sense, they represent Internationalism in its noblest form. When frontiers close and intellectual intercourse diminishes, they gradually fall into abeyance.

Fig. 1.

Dr. Isaac Oróbio de Castro, 1620-1689.

The XVIIth century, which was so disastrous for Portugal, lavished new ideas and new methods on the rest of Europe. The study of Physics, Chemistry, Anatomy and Medicine was taking new shape. (Harvey, Marcello Malpighi, Asselio, Pecquet, Warthon, Wirsung, Nicolas Tulp, Nicolas Steno, Borelli, Daniel Sennert and the Jew Rodrigo de Castro who, in 1627, enunciated the theory of the immobility of the pubic region.[3])

[3] Paul Diepgen, *Historia de la Medecina*. Barcelona, 1925. Vol. II.

In his thirst for knowledge Oróbio, like many of his promising countrymen, was irresistibly drawn to Spain. He proceeded to Salamanca, where he graduated and became Lecturer of Metaphysics.[4] Thence he went to Seville, where he was appointed Physician to the Duke of Medina Coeli and the House of Burgundy.[5] Mendes dos Remédios tells us he practised most brilliantly.

However, when wrapped up in his profession and secure in his success, he thought his Marrano ancestry forgotten, the spies dropped by the Holy Office into every nook and cranny, that seemed to thrive on the very shadows, singled him out and, urged by his enemies (*Ishak Oróbio, the famous doctor whose books stirred up jealousy* . . .), arrested him and locked him up for three weary years in the damp and pitiless dungeon at Seville.

What went on in Oróbio's masterly mind during those hopeless years of captivity? It is not hard to guess.

Abandoned to his own thoughts for such a long period, deprived of his Chair, of intercourse with his pupils, of his practise, nearer death than life, yet offering a stubborn and gallant resistance to the shackling of his intense inner life, Don Isaac experienced a strange revival of faith, a wonderous rebirth of soul. However, to elude the vigilance of the Inquisition, which was later to burn him in effigy,[6] he daily proclaimed to his tormentors his Catholic faith, and so loud and convincing were his protestations, that he was finally set free.

Mendes dos Remédios is mistaken when telling us he escaped. It was not so easy to escape from the Seville dungeon or to elude the spies of the Inquisition! . . .

We find him next at Toulouse,[7] where, to the astonishment of all, he was publicly appointed Lecturer of Medicine and Adviser to the King of France.

In spite of this fresh triumph, of the promise of future dignities, we see "*Don Balthasar Oróbio de Hipocrates honor*," worn out with the constant denial of his faith, with the strain of guarding his

[4] E. E. Arteaga, *Historia de la Universidad de Salamanca*. Salamanca, 1914.
[5] M. B. Amzalak.
[6] M. M. Bejarano, *Histoire de la Juiverie de Séville*. Madrid, 1922.
[7] M. B. Amzalak.

most sacred emotions from the eyes of a cold and indifferent world, give up his brilliant position and proceed to "*Amsterdam, where he attained great prestige.*" [8] There he devoted himself, body and soul, to "*the observation of the divine law of Moses*" and was circumcised, adopting the name of Isaac and giving up that of Balthasar, which would for ever be bound up in his mind with the horrors of the Seville dungeon and the stake.

Once in Holland, among his own people, surrounded by the other Portuguese emigrants, Oróbio de Castro, Lecturer of Metaphysics and Medicine at the Universities of Salamanca, Alcala and Seville, Physician to the Houses of Medina Coeli and of Burgundy, Public Lecturer to the King of France in the city of Toulouse and his Honorary Adviser, a former victim of the Inquisition, tormented and forgotten at Seville, impatiently brushed aside all memory of his successful career and devoted himself entirely to religious and metaphysical studies.

He wrote several works pointed out by M. B. Amzalak in his admirable essay. I will refer to one which is of particular interest to medical men: *Epistola invectiva contra un Judio Philosopho medico, que negava la ley de Mosse, y siendo Atheista affectava la ley de naturaleza.* This was directed against Juan de Prado, doctor and poet, living in Holland.

"*Very numerous have been the apologetic and controversial writings composed by the Jewish emigrants from Spain and Portugal*"; Maximiano de Lemos tells us, "*the manuscripts of several have been preserved: Morteira, Oróbio de Castro, Pizarro etc.*"

Referring to Oróbio and to many others persecuted and vexed by the Inquisition, Ramon y Cajal writes: [9]

"*The Holy Office, in relieving the country of Marranos, Protestants and Moslems, by reducing to silence or by exiling all heretical thinkers, deprived Spain of her most creative minds; for it is precisely among the men who reject dogmas and are undaunted by the tyranny of a particular school of thought, that the great pioneers of Philosophy and Science are to be found. Nothing but a sorry com-*

[8] Mendes dos Remédios, *Os Judeus em Portugal.* Coimbra, 1928. Vol. II.

[9] Ramon y Cajal, *Reglas y consejos sobre investigacion cientifica.* Madrid, 1923, p. 242.

pany of routineers, timid, intolerant and senile minds, was left after this ruthless weeding had taken place!"

What a marvellous example of industry, tenacity of purpose and faith is given us by Don Isaac or Balthasar Oróbio de Castro, *Bonaventurado e ynsigne Varao . . .*

AUTHORITIES

Isaac Oróbio de Castro, *La observancia de la Divina Ley de Mosseh*, manuscript published with an introductory essay by M. B. Amzalak. Coimbra, 1925.

Maximiano de Lemos, *Zacuto Lusitano*. Oporto, 1909.

———, *Estudos de Historia da Medicina Peninsular*. Oporto, 1916.

A. Silva Carvalho, *Um célebre médico português*. Lisbon, 1928.

———, *Médicos e Curandeiros*. Lisbon, 1928.

———, *História da Medicina Portuguesa*. Lisbon, 1929.

Hernani Cidade, *Ensaio sôbre a crise mental do sèculo XVIII*. Coimbra, 1929.

Kayserling, *Estudios historicos y literarios sobre los judios de España*. Madrid, 1848.

———, *Romanische Poesien der Juden in Spanien*. Leipzig, 1859.

———, *Biblioteca Judaica*. Leipzig, 1863.

J. Lúcio de Azevedo, *História dos Cristãos Novos Portugueses*. Lisbon, 1922.

J. Leite de Vasconcellos, *Antroponimia Portuguesa*. Lisbon, 1928.

A. Ribeiro dos Santos, *Memórias da Litteratura Sagrada dos Judeus Portugueses no Século XVII*. Memor. III, p. 321.

Francisco Manuel Alves, *Os Judeus*. Braganza, 1924. pp. 94-95.

Adolfo Benarús, *Os Judeus*. Lisbon, 1926.

TEXTS AND DOCUMENTS

BRITISH PERIODICALS OF MEDICINE

A Chronological List

W. R. LEFANU, M.A.
Librarian, Royal College of Surgeons of England

Part I: 1684-1899 (*Continued*)

358. **1871. Chloralum (The) Review**; a sanitary journal. v. 1, n. 1-6. 4° London, 15 July–15 Dec. 1871. BM, SG.

358a. 1671. **London (The) Medical Journal.** n. 1. 4° London, 1871. BM.

358b. 1871. **Medical (The) Free Press** and Journal of Hygiene. n. s., n. 1-2. 8° London, 1871. BM.

359. **1871. Medical Freedom**: the national free medical adviser. v. 1, n. 1-18. 4° Manchester, 4 Feb.–3 June 1871. SG.

359a. **1871-72. Invalid's (The) Guide.** 4 n. 8° London, March 1871–Feb. 1872. BM.
Continued as Medical Review and Invalid's Guide 1872.

360. **1871-74. Food, Water and Air** in relation to the public health. (Monthly) v. 1-3. 4° London, Nov. 1871–Nov. 1874. BM, SG.

361. **1871-76. Barth (Il).** Gazetta di medicina e scienze naturali. v. 1-4. 8° Malta, 25 July 1871–13 June 1876. SG. BM 1871-74.

362. **1871-76. West Riding (The) Lunatic Asylum Medical Reports.** v. 1-6. 8° London, 1871-1876. RCS, SG. The Asylum is at Wakefield. The Reports contain David Ferrier's early neurological work.

363. **1871-78. Doctor (The),** a monthly review. v. 1-8. 4° London, 1871-1878. BM, SG.

364. **1871-81. Proceedings** of the Dublin Obstetrical Society (founded Nov. 1838). Sessions 34-43, 1871/2–1880/1. 8° Dublin, 1872-1881. SG. Previously issued in Dublin J. of med. Sci. from 1839, v. 15, p. 160. Merged in Trans. Acad. Med. Ireland 1883.

365. **1872-73. Aberdeen (The) Medical Student.** (Fortnightly) n. 1-20. 4° Aberdeen, 1872-1873. SG.

366. **1872-73. Anti-vaccinator (The)** and public health journal. (Fortnightly) n. s., v. 1, n. 1-26. 4° London, 15 April 1872–1 May 1873. BM, SG, Pitt.

367. **1872-73. Journal (The) of the Anjuman-i-Panjab.** (Medicine, science, etc.) (Weekly) fol. Lahore, 1872-1873. SG. Arabic text, English title.

368. **1872-80. Monthly (The) Review of Dental Surgery.** v. 1-8; 9, n. 1-3. 8° London, June 1872–March 1880. BM, SG.
Continued n. s. with same title 1880.

368a. **1872-87. Medical (The) Review and Invalid's Guide.** 8° London, Dec. 1872–April 1887. BM.
Continuation of Invalid's Guide 1871.

369. **1872-88. Canada (The) Medical and Surgical Journal.** A monthly record . . . v. 1-16. 8° Montreal, 1872-1888. RCS, SG, MacD.
Continuation of: Canada Medical Journal 1864.
Continued as: Montreal Medical Journal 1888.

370. **1872-89. Proceedings** of the Medical Society of London. v. 1-12, 1872/4–1888/9. 8° London, 1874-1890. RCS, SG.
Continuation of, and continued as, Transactions 1810 and 1890.

371. **1872-1904. Canada (The) Medical Record.** A monthly journal of medicine and surgery. v. 1-32. 8° Montreal, 1872-1904.
Continuation of Canada Medical Journal 1864. WL 5869 & 5905, SG, MacD.

372. **1872-1919. Birmingham Medical Review:** a quarterly journal. v. 1-83. 8° Birmingham, 1872-1919. Title of v. 83 'Jan.-Dec. 1918,' but nos. 478 & 479 included in this vol. were published in 1919. v. 7-10, 1878-81 also called n. s., v. 1-4; v. 53-70, 1903-11 also called n. s., v. 1-18. From 1882 became monthly.

Revived: n. s., v. 1—. 8° ibid. 1926—. WL 2996, RCS, SG.

373. **1872-1922. Dublin (The) Journal of Medical Science.** 3. s., v. 53-148 and n. 577-578; 4. s., n. 1-24. 8° Dublin, 1872–Feb. 1920; March 1920–Feb. 1922. From 1875 incorporates Irish Hospital Gazette 1873-75; from 1920 includes Transactions of the Royal Academy of Medicine in Ireland (1883).

Continuation of Dublin Quarterly Journal of med. Science 1846.

Continued as Irish Journal of Medical Science 1922. WL 7501, RCS, SG, Kirkpatrick.

374. **1872—. Guy's Hospital Gazette.** v. 1-7; n. s., v. 1-5; n. (3)s., v. 1—. 8° London, 1 Oct. 1872–18 Dec. 1875; 1876–Oct. 1880; 8 Jany. 1887—. WL 9344, RCS, SG.

375. **1872—. Journal of the Anthropological Institute** of Great Britain and Ireland. v. 1—. 8° London, 1872—. v. 28-30, 1899-1900, also called n. s., v. 1-3. v. 1 incorporates Proceedings of the Anthrop. and Ethnol. Societies 1870-72. From 1907, v. 37, called Royal Anthropological Institute. 'Anthropological Reviews and Miscellanea' (Appendix to v. 30, 1900) continued as Man 1901—.

Index of the publications of the Anthrop. Inst. 1843-91 (1893) includes: J. Ethnol. Soc. 1848-71; Trans. Ethnol. Soc. 1861-69; Trans. Anthrop. Soc. 1863; Anthrop. Rev. 1863-70; Mem. Anthrop. Soc. 1863-70; J. Anthrop. Soc. 1864-71; Popular Mag. of Anthrop. 1866; J. Anthrop. 1870-71; Proc. Anthrop. & Ethnol. Socs. 1870-72; J. Anthrop. Inst. 1872-91; Anthropologia 1873-75.

Yearly indexes include index to Man from 1901. WL 11028, RCS, SG.

376. **1872—. Union (L') médicale du Canada.** Revue médico-chirurgicale. v. 1—. 8° Montréal, 1872—. From 1887, v. 16— also called n. s., v. 1—. In Jany. 1893 incorporates Gazette médicale de Montréal 1887. WL 22048 (no registration), SG, MacD.

377. **1873. Canadian (The) Medical Times.** A weekly journal. v. 1, n. 1-26. fol. Kingston, 5 July–27 Dec. 1873. Running title 'The Medical Times.' SG, MacD.

378. **1873. Family (The) Physician** and People's Medical Adviser. n. 1. 4° London, 1873. BM.

379. **1873. Medical (The) Record.** Title of v. 1, n. 1-6 of London Medical Record 1873-87.

380. **1873. Photographic Clinique** of the British Hospital for Diseases of the Skin. A quarterly periodical. Edited by Balmanno Squire, n. 1-4. fol. London, n. d. (? 1873). RCS, SG.

381. **1873-74. Medical Notes and Queries.** v. 1-2, n. 28-40. 8° London, 1873-1874. BM.

382. **1873-75. Irish Hospital Gazette.** (Fortnightly) v. 1-3. 8° Dublin, 1 Jany. 1873–15 June 1875. RCS, SG, Kirkpatrick.

Continuation of Dublin Hospital Gazette 1854.

Incorporated in Dublin Jour. of med. science (1872).

383. **1873-76. Anthropologia,** in which are included the Proceedings of the London Anthropological Society. v. 1 & Supplement 1873-1875. London, 1874-1876. For Index see J. Anthrop. Inst. 1872. BM, Pitt. A few members of the Anthropological Society of London (1863), on the formation of the Anthropological Institute (1872), formed this London Anthropological Society.

384. **1873-77. Public Health:** a journal of sanitary science and progress. v. 1-7. 4° London, May 1873–Dec. 1877. (Monthly; from Nov. 1873 fortnightly; from Jany. 1875 weekly). RSM, SG. From 14 April 1876, in v. 4, incorporates Sanitary Review 1875-6.

385. **1873-78. Liverpool (The) and Manchester Medical and Surgical Reports.** v. 1-6. 8° Manchester and Liverpool, 1873-1878. Combining Liverpool Med. & Surg. Repts. 1867 with Manchester med. & surg. repts. 1870. Continued as Liverpool med.-chir. jour. 1881. RCS, SG.

386. **1873-79. Annual Reports** of the transactions of the South Durham and Cleveland medical Society n. 1-6, 1873/4–1878/9. 8° (various places), 1875-1879. SG.

387. **1873-79. Society of Medical Officers of Health,** Annual Reports 1873/4–1878/9. 8° London, 1874-1879. RCS, SG.
Continuation of Assocn. of M. O. H. 1868-73.
Continued as Transactions of the Society of M. O. H. 1879-87.

388. **1873-80. Obstetrical (The) Journal** of Great Britain and Ireland. (Monthly) v. 1-8. 8° London, April 1873–Dec. 1880. RCS, SG. The same: with an American supplement. v. 1-8. 8° Philadelphia, April 1873–Dec. 1880. (Supplement discontinued at end of v. 7). SG.

389. **1873-84. Students' (The) Journal** and Hospital Gazette: a fortnightly review . . . (from 1882, weekly). v. 1-12. 4° London, 1873-1884. BM, RCS (v. 1-7), SG.
Continued as Hospital Gazette and Students' Journal 1885.

390. **1873-87. London (The) Medical Record.** (Weekly; after 30 June 1875 monthly). v. 1-15. 8° London, 1873-1887. RCS, SG. v. 1, n. 1-6 called 'Medical Record.'
Continued as London Medical Recorder 1888.

391. **1874. Guide (Le) sanitaire;** journal d'hygiène pratique . . . ; paraissant tous les mois. v. 1, n. 1. 8° Montreal, Nov. 1874. SG, MacD.

392. **1874. Lectures on public health;** delivered in the lecture-hall of the Royal Dublin Society. 1 v. 8° Dublin, 1874. SG.

393. **1874-75. Medico-Pharmaceutical (The) Abstract and Review.** (Monthly) v. 1-2, n. 1. 4° London, Sept. 1874–Sept. 1875. From Oct. 1874 incorporates Chemist's and Druggist's Advocate. BM, SG.

394. **1874-78. Annual Reports on Diseases of the Chest,** under the direction of Horace Dobell. v. 1-3, 1 June 1874–1 June 1877. 8° London, 1875; 1876; 1878. v. 3 called 'Reports on Diseases of the Chest.' RCS, SG.

394a. **1874-78. Magnetic (The) Review.** A record of the curative electric science and journal of health. v. 1, n. 1-3; n. s., v. 1, n. 1-2. 4° London and Edinburgh, 1874; 1878. BM.

395. **1874-78. Transactions** of the Bristol Medico-Chirurgical Society. Comprising abstracts from the proceedings for the first four years 1874-78. 1 v. 8° London, 1878. RCS, SG.

396. **1874-80. Sanitary (The) Journal,** devoted to public health. v. 1-4. 8° Toronto, July 1874–Aug. 1880. SG, MacD.
Continued: Sept. 1880–May 1883 Canada Health Journal.
June 1883–Sept. '83 Sanitary Journal.
Oct. 1883–Oct. '85 Dominion Sanitary Journal.
Nov. 1885–Aug. '86 Man.
Sept. 1886–July '88 Canada Health Journal.
July 1888–Dec. '89 Health Journal.
Jany. 1890–92 Canada Health Journal.

397. **1874-90. Proceedings** of the Staffordshire Branch, British Medical Association. Stoke-on-Trent, 1874-1890. BMA.

398. **1874-1916. Sanitary (The) Record.** A journal of public health. v. 1-10 (weekly); n. s. (monthly). 8° London, 4 July 1874–27 June 1879; July 1879-1916. WL 19718, SG.
Continued as Municipal Engineering and Sanitary Record 1916. Supplements: see Weekly Exhibition Record 1884; Food and Health 1897.

398a. **1875-76. Sanitary (The) Review.** 8° London, 1875-1876. BM.
Incorporated in Public Health (1873).

399. **1875-77. Melbourne Medical Record.** (Weekly) v. 4-7, n. 5. 4° Melbourne, Feb. 1875-1877. RSM (incomplete), SG, Pitt. From Oct. 75 fortnightly.
Continuation of Medical Record of Australia 1861.

400. **1875-77. Proceedings** of the North Western Association of the Medical Officers of Health for the years 1875-1876. 8° Birkenhead, 1876-1877. SG.

401. **1875-77. Public Health Magazine and Literary Review.** (Monthly) v. 1-2. 8° Montreal, 1875-1877. SG, MacD.

402. **1875-80. Proceedings** of the Psychological Society of Great Britain 1875-1879. 1 v. 8° London, 1880. SG.

403. **1875-81. Medical (The) Enquirer:** a monthly journal and review, the organ of the National Association for the abolition of the state regulation of prostitution. v. 1-4. 4° Liverpool and London, 1875-1881. v. 4, quarterly, also called n. s. BM, RSM, SG.

1875-83. Journal of Psychological Medicine and Mental Pathology 1875-1883. See 1848.

404. **1875-84. Herald (The) of Health:** a journal of sanitary and social science. (Monthly) v. 1-2 and n. 1-74. 4° London, July 1875–June 1877; Jany. 1878–Feb. 1884. BM, SG. Living Age 1877 issued as a companion to this. n. 1-12, 1878 called Penny Herald of Health.

405. **1875-89. Health Lectures for the People.** Health lectures delivered, under the auspices of the Manchester and Salford Sanitary Association, in Manchester. Series 1-11, 1875/6–1887/8. 12° Manchester, 1878-1889. SG.

406. **1876-78. Reports on Diseases of the Chest.** Title of v. 3 (1876/7), 1878, of Annual Reports on Dis. of Chest 1874-78.

407. **1876-78. Medical (The) Examiner.** n. 1-141, v. 1-4. 4° London, Jany. 1876–12 Sept. 1878. RSM, RCS (incomplete), SG.

408. **1876-78. Sanitary (The) Journal for Scotland.** v. 1. 4° Glasgow, March 1876–Feb. 1878. SG. BM.

Continued as Sanitary Journal 1878.

409. **1876-82. Canadian (The) Journal of Medical Science.** Monthly. v. 1-7. 8° Toronto, 1876-1882. SG, MacD.

Continued as Canadian Practitioner 1883.

410. **1876-83. Health Society of New South Wales** (formerly Ladies' Sanitary Association). Publications, n. 1-11. Sydney, 1876-1883. Pitt.

411. **1876-1903. Montreal General Hospital.** Pathological report for the year ending May 1st 1877 by W. Osler. v. 1. 8° Montreal, 1878.

Montreal General Hospital. Reports clinical and pathological by the medical staff, edited by W. Osler. v. 1. 8° Montreal, 1880. Contains at pages 253-342 'Pathol. rept. n. 2 by W. Osler, Oct. 1877–Oct. 1879.'

Pathological Reports. Montreal General Hospital. n. 3-4. Reference index of post-mortems 1883-95; 1 Jany. 1896–31 Dec. 1902. 8° n. p. or d. (Montreal, 1897; 1903?). WL 6414, RCS, SG, MacD.

412. **1876-1909. Monthly (The) Magazine of Pharmacy,** Chemistry, Medicine, etc. 4° London, April 1876-1909. WL 14518.

413. **1876—. Mind.** A quarterly review of psychology and philosophy. v. 1-16; n. s., v. 1—. 8° London 1876-1891; 1892—. Index 1-10, 1-16; n. s. 1-12, 13-32, 33-42. WL 13703. RCS, SG.

414. **1877. Journal of the Congress and Exhibition** of the Sanitary Institute of Great Britain held at Leamington 1877. v. 1. 8° London, 1878. BM, SG.

415. **1877. Living (The) Age;** a weekly condensation of news and thought. v. 1, n. 1-6. fol. London, 16 June–21 July 1877. SG.

Companion issue to Herald of Health 1875-84.

416. **1877. Ontario (The) Journal of Health.** (Monthly) v. 1, n. 1. fol. London, Ontario, April 1877. SG, MacD.

417. **1877. Sanitary (The) Inspector,** a monthly visitor and adviser. v. 1. 4° London, 1877. BM.

418. **1877. Transactions** of the Canada Medical Association. 10. annual meeting, v. 1. 8° Montreal, 1877. RCS, SG. MacD.

Continuation of Origin . . . of Canadian med. Assocn. 1867.

419. **1877-78. Australian (The) Practitioner,** a quarterly. v. 1. 8° Newcastle, 1877-1878. SG. Cumpston.

420. **1877-79. Sanitary (The) Register,** a monthly record of sanitary news. [v. 1-3]; n. 1-36. 4° London, 1877-79. BM, SG incomplete.

Continued as Sanitary Engineer 1880.

421. 1877-81. Health, a family magazine. v. 1-5, n. 3. 8° London, 1877-1881. BM.

422. 1877-99. Australian Health Society Publications. n. 1-24. Melbourne, 1877-1899. n. 1-13 also collected in 1 v. as 'Sanitary Tracts 1881/2.' Revived: 1901-17. Pitt.

See also Australian Health Society, Health Lectures 1886.

423. 1878. Penny (The) Herald of Health. (Monthly) v. 1. 4° London, Jany.–Dec. 1878. BM, SG.

Continuation of, and continued in, Herald of Health 1875.

424. 1878-80. Modern (The) Physician and Family Adviser. A monthly journal. v. 1-2. 8° London, 1878-1880. BM, SG.

425. 1878-80. Organon (The). A quarterly Anglo-American journal of homoeopathic medicine. v. 1-3. 8° Liverpool, 1878-1880. SG. BM.

425a. 1878-83. Psychological Review. v. 1-6, n. 2. 8° London, 1878-1883. BM.

426. 1878-85. Australasian Chemist and Druggist (originally: Chemist & Druggist, London, 1859—, Australasian supplement). v. 1-8, 1878/9-1885. Melbourne, 1878-1885. Pitt, Bolton.

Continued as Australasian Journal of Pharmacy 1886 and Chemist & Druggist of Australasia 1886.

427. 1878-1902. Sanitary (The) Journal, a journal of hygiene and public health. (Monthly) n. s., v. 2-17; n. (3) s., v. 1-8. 8° Glasgow, March 1878–Feb. 1894; March 1894–Feb. 1902. WL 19715, SG.

Continuation of Sanitary Journ. for Scotland 1876.

Continued as Municipal Record & Sanitary Jour. 1902.

428. 1878-1903. Guardian (The) of Health. A bi-monthly journal on the principles of hygiene, showing the English and native way of treating diseases. (Urdu text) v. 1-26. 8° Lahore, 1878-1903. SG.

v. 1, n. 1-3 called 'Guardian of Health, entitled To Quti Ilalat.'

429. 1878-1915. British (The) and Colonial Druggist, a monthly journal of pharmacy. 4° London (?1878)-1915.

Continued as British & Colonial Pharmacist 1915. WL 3527 (1896-1915), SG (1885, v. 8).

430. 1878—. Brain, a journal of neurology. v. 1—. 8° London, 1878. v. 10-26 'edited for the Neurological Society of London,' v. 28-30 'edited for the Neurol. Soc. of the United Kingdom.' Index 1-7, 1-23. WL 3464, RCS, SG.

431. 1878—. Journal (The) of Physiology. v. 1—. 8° Cambridge, 12 March 1878—. (v. 1-2, London & Cambridge.) From v. 4 incorporates Proceedings of the Physiological Society, 13 Dec. 1883—.

Index 1-25 (1901) 1: authors, 2: vol. contents, 3: subjects.
26-50 (1919) 1: authors, 2: vol. contents.
1-60: authors (1928), subjects (1931).

Supplements to v. 1-5: 'List of titles of works and papers of physiological interest published in the year(s) 1878 (-1883/4).'

From 1926, v. 61, 'edited for the Physiological Society.' WL 11454, RCS, SG.

432. 1879-81. Annals of Chemical Medicine. v. 1-2. 8° London, 1879-1881. RCS, SG.

433. 1879-82. Abeille (L') médicale. Journal de l'École de médecine et de chirurgie de Montréal, de l'Hôpital Hôtel-Dieu, de la Maternité Ste. Pélagie et des dispensaires. (Monthly) v. 1-4, n. 1. 8° Montreal, Jany. 1879–Jany. 1882. SG, MacD.

434. 1879-82. Transactions (The) of the Perthshire Medical Association. v. 1-2, 1879-80–1880-81. 8° Perth, 1882. SG.

435. 1879-87. Transactions of the Society of Medical Officers of Health. 1879-80–1886-87. 8° London, 1880-1887. RCS, SG.

Continuation of Society of M.O.H., ann. repts. 1873-79.

Continued as Public Health 1888.

436. 1879-92. Proceedings of the South Australian branch of the British Medical Association. 1879/80–1891/92. 8° Adelaide, 1879-1892. Pitt, SG (incomplete).

Preceded by 'Report.'

437. **1879-94. Transactions** of the Sanitary Institute of Great Britain. v. 1-14, 1879-1893. 8° London, 1880-1894. v. 1 called "Report of the Congress . . ."
Continued as Journal of the Sanitary Institute 1894. BM, SG.

438. **1879-1921. Malthusian (The).** A monthly journal. v. 1-45. 4° London, 1879–15 Dec. 1921. BM, SG.
Continued as New Generation 1922.

439. **1879—. Medical Missions at Home and Abroad.** (Quarterly) n. 1-29; n. s., (n. 1)—. 8° London, 1879-1885; 1885—. WL 13043, BM.

440. **1879—. Vaccination (The) Inquirer and Health Review.** (Monthly) v. 1—. 8° London & Glasgow, April 1879—. From 1881, v. 3 sub-title 'the organ of the London Society for the abolition of compulsory vaccination.' WL 22171, BM, SG.

441. **1880. Calcutta Medical News.** n. 1-8. Calcutta, Jany.–Aug. 1880. Crawford.

442. **1880. Monthly (The) Review of Dental Surgery.** v. 1. 8° London, Jany.–Dec. 1880.
Continuation of Monthly Review of Dental Surgery 1872.
Continued as Journal of the British Dental Assocn. 1881.
The issues for Jany.–March called v. 9, n. 1-3. The March issue is the first issued by the British Dental Assoc. and the April issue is accordingly numbered v. 1, n. 2. WL 11081, RCS, SG.

443. **1880. Proceedings** of the New South Wales branch of the British Medical Association. 1880. Sydney. Pitt.

444. **1880-81. Sanitary (The) Engineer** with which is incorporated the Sanitary Register (1877). v. 1-2, n. 3; old series [v. 4-5], n. 37-51. 8° London, Jany. 1880–March 1881. BM, SG.
Incorporated in Sanitary Engineering 1881.

445. **1880-81. Specialist (The):** a journal of medical and surgical science. Devoted to ophthalmology, otology, rhino-laryngology, odontology, dermatology, psychology and gynaecology. (Monthly) v. 1; 2, n. 1-4. sm. 4° London, Sept. 1880–Dec. 1881. SG.

446. **1880-86. Transactions** of the Calcutta Medical Society, reprinted from the Indian Medical Gazette. v. 1-7. 12° Calcutta, 1880-1886. RSM, SG, Crawford (1880-98).

447. **1880-92. Canada (The) Health Journal.** v. 5-14. 8° Toronto; Ottawa, Sept. 1880-1892.
Continuation of Sanitary Journal 1874, q. v. for other changes of title.
SG, MacD.

448. **1880-94. Journal of Medicine** and Dosimetric Therapeutics according to the method of Ad. Burggraeve. (Monthly) v. 1-15. 8° London, 1880-1894. n. 1-2, v. 1, called 'Journal of Medicine, according to the dosimetric method of Dr. Burggraeve.' RCS (v. 2-15), SG, RSM.

449. **1880-95. Edinburgh Health Society.** Health Lectures for the people. Series 1-15, 1880/81–1894/95. 12° Edinburgh, 1880-1895. SG.

450. **1880-96. Phrenological (The) Magazine.** v. 1-5; n. s., v. 1-12. 8° London, 1880-1884; 1885-1896. BM. Incorporated into Phrenological Journal (New York).

451. **1880-98. Aesculapian (The) Society** (established 1880). Abstract of Transactions. v. 1-6. 8° London, 1880-1898. SG incomplete.

452. **1880-1917. Royal (The) London Ophthalmic Hospital Reports.** v. 10-20. 8° London, Aug. 1880-1917. Index 1-12 (1857-89), 1893; 13-20 (1890-1916), 1917.
Continuation of Ophthalmic Hospital Reports 1857.
Continued in British Journal of Ophthalmology 1917. WL 19538, RCS, SG.

453. **1880—. Transactions** of the Ophthalmological Society of the United Kingdom. v. 1—. 8° London, 1880—. WL 21634, RCS, SG.
Index to each 10 vols.

454. **1881. Transactions** of the Brighton Health Congress 1881. 1 v. 8° London. SG. RCS.

455. 1881-83. Family (The) Doctor. A popular monthly journal. v. 1-3, n. 5. 4° London, Aug. 1881–May 1883. BM, SG.

456. 1881-83. Medical News. A weekly journal of the medical sciences. n. 1-94, v. 1-4. 8° London, 28 Oct. 1881–31 Aug. 1883. RCS incomplete, SG.
n. 1-13, v. 1, called Medical News & Collegiate Herald.

457. 1881-85. Asylum (The) Journal, . . . Public Lunatic Asylum for British Guiana. v. 1-5. sm. 4° Berbice, 1881-1885. RCS incomplete, SG.

458. 1881-89. Sanitary Engineering. n. s., v. 6-14. 8° London, June 1881–11 May 1889. BM, SG.
Continuation of Sanitary Engineer and Register 1880-81.

459. 1881-94. Retrospect (A) of Surgery prepared by F. J. Shepherd. v. 1-3, Sept. 1881–Dec. 1885; Jany. 1886–Jany. 1890; Jany. 1890–Jany. 1894. 8° Montreal 1886-1894.
Reprints: v. 1 from Canadian med. & surg. journal; v. 2-3 from Montreal med. journal. RCS.

460. 1881-1903. Journal (The) of the British Dental Association. A monthly review. v. 2-24, n. 3. 8° London, Jany. 1881–March 1903.
Continuation of Monthly Review of Dental Surgery 1880.
Continued as British Dental Journal, April 1903, v. 24, n. 4. WL 11081, RCS, SG.

461. 1881-1914. Australasian (The) Medical Gazette. (From 1895 the official organ of the combined Australasian branches of the British Medical Association.) v. 1-35. 4° Sydney, 1881-1914. In 1897 incorporates New Zealand Medical Journal 1887. In 1914 incorporated with Australian Medical Journal 1856 into Medical Jour. of Australia. WL 2235, RCS, SG, Pitt.

462. 1881-1916. Ophthalmic (The) Review, a monthly record of ophthalmic science. v. 1-35. 8° London, Nov. 1881–Dec. 1916.
Index 1-7, 8-21, 22-35. Incorporated in British Jour. of Ophthalmology, 1917. WL 15700, RCS, SG.

463. 1881—. Dental (The) Record. A monthly journal . . . v. 1—. 8° London, 1881—. WL 7153, RCS, SG.

1881—. Liverpool Medico-chirurgical Journal 1881—. See 1857.

1881—. Transactions of the Medico-chirurgical Society of Edinburgh 1881—. See 1824.

464. 1882. Proceedings of the Allahabad Medical Society. v. 1, n. 1-5. 8° Allahabad 1882. Continued as:—

1882-83. Proceedings of the N. W. Provinces and Oudh branch of the British Medical Association. v. 1, n. 6-7; 2, n. 8-18. 8° Allahabad, Nov. 1882–Dec. 1883. SG.
Continued as Indian Medical Journal 1884.

465. 1882-85. Midland (The) Medical Miscellany. A monthly magazine . . . n. 1-42; v. 1-4, n. 6. 8° Leicester, Jany. 1882–June 1885. From n. 13 (Jany. 1883, v. 2, n. 1) '. . . and Provincial Medical Journal' added to title.
Continued as Provincial Medical Journal, July 1885, v. 4, n. 7 (n. 43).
Supplement: 1884 'Health Exhibition Supplement' n. 1-3. RCS, SG.

466. 1882-95. Proceedings of the Medico-chirurgical Society of Montreal. v. 1-7, 1882/3–1893/4. 8° Montreal 1884-1895. BMA (incomplete), SG, MacD.

467. 1882-96. Proceedings of the West London Medico-chirurgical Society. v. 1-7, 6 Oct. 1882–1894/5. 8° London, 1884-1896. v. 2-7 lettered on publisher's covers as 'Transactions.'
Continued as West London Medical Journal 1896. RCS, SG.

468. 1882—. Jennerian. London 1882—. WL 10900.

469. 1882—. Quarterly papers of the Edinburgh medical missionary society. 8° Edinburgh, 1882—. SG (1882, v. 3-1899), WL 17522 (1883—).
Continuation of Edinb. med. miss. Soc., Occasional papers 1854.

470. 1883. Transactions of the Vaccination Inquiry. Part 1, edited by Montague D. Makuna. 4° Leicester, 1883. RCS, SG.

1883. Sanitary (The) Journal. See 1874.

471. 1883-84. Edinburgh (The) Clinical and Pathological Journal. (Weekly) v. 1. 8° Edinburgh, 13 Oct. 1883–4 Oct. 1884. BM, SG.

472. 1883-84. Water. A journal for collecting and diffusing information on water supply and sanitary science. (Weekly) v. 1, n. 1-35. fol. London, 8 Dec. 1883–2 Aug. 1884. Merged in Sanitary World 1884. BM, SG.

473. 1883-85. Dominion (The) Sanitary Journal. 8° Ottawa, Oct. 1883–Oct. 1885. Temporary title of Sanitary Journal 1874, q. v.

474. 1883-85. Transactions of the Willan Society of London, a society for the study of dermatology and syphilis. v. 1, 1883/4. 8° London, 1885. RCS, SG.

475. 1883-86. Health. A weekly journal of domestic and sanitary science. v. 1-6. 4° London, 13 April 1883–26 March 1886. SG.

476. 1883-87. Transactions of the Academy of Medicine in Ireland (founded 1882). v. 1-5. 8° Dublin, 1883-1887.
Continued as:
1888-1920. Transactions of the Royal Academy of Medicine in Ireland. v. 6-37. 8° Dublin, 1888-1920. v. 36-37 (1918-1919), 1920, in one.
Continued in Dublin Journal of Med. Science (1872). WL 21366, RCS, SG, Kirkpatrick.
The Academy amalgamated the Dublin medical societies.

477. 1883-88. Collective (The) Investigation Record, edited for (v. 2, 'by'; v. 3-4 'containing the reports of') the Collective Investigation Committee of the British Medical Association. v. 1-2. 8° London, July 1883–July 1884. v. 3-4. fol. London 1887, 1888. RCS, SG.

478. 1883-88. Health (The) Journal and record of sanitary engineering: a monthly review. v. 1-5. 8° Manchester, June 1883–May 1888. SG. BM.

479. 1883-98. Healthy Life and Hydropathic News. (Monthly) v. 1-15. 4° & 8° London, 1883-1898. BM, SG incomplete. v. 5 etc. called Healthy Life, the British hydropathic & sanitary journal.

480. 1883-1901. Quarterly (The) Therapeutic Review. v. 1-19. sm. 4° London, 1883-1901. WL 17530, SG.

481. 1883-1907. Transactions of the Glasgow Pathological and Clinical Society. v. 1-11, 1883/4–1905/07. 8° Glasgow, 1884-1908. Reprinted from Glasgow medical journal (1828). Amalgamated with Trans. Medico-chirurgical Society of Glasgow (1895) 1907. WL 21498, RCS, SG.

482. 1883-1924. Canadian (The) Practitioner. v. 8-49. 8° Toronto, 1883-1924.
Continuation of Canadian Journal of medical science 1876. v. 24-46, 1899-1921, incorporating Canadian Medical Review (1895) called Canadian Practitioner and Review.
Continued as Canada Lancet and Practitioner 1925. WL 5919, RCS (from v. 17), SG, MacD.

483. 1883—. Bristol (The) Medico-chirurgical Journal. v. 1—. 8° Bristol, 1883—. Index 1-50. WL 3525, RCS (from v. 8), SG.

484. 1883—. Medical (The) Annual and Practitioner's Index. n. 1—. 8° Bristol, 1883—. 1886 called Medical (The) Annual. A record & review . . . and Practitioner's Index. From 1901 (19th year) called Medical (The) Annual, a year book of treatment and practitioner's index. Synoptical index to remedies & diseases 1887-98; 1899-1904; 1905-14. General index 1915-24; 1925-34. WL 12994, RCS, SG.

485. 1883—. Proceedings of the Physiological Society. Issued in Journal of Physiology, 1878, from v. 4, 1883.

486. 1884. Health and Home. A journal of sanitary science and home hygiene; also the official organ of the Canadian Sanitary Association. v. 1, n. 1-3. 8° Montreal, Feb.–April 1884. SG, MacD.

487. 1884. Weekly (The) Exhibition Record: being a supplement of 'The Sanitary Record,' (1874) the organ of the National Health Society. n. 1-13. 8° London, 10 May–4 Aug. 1884. SG.

488. 1884-87. Journal of the Hospitals Association. v. 1-3. 8° London, 1884-1887. SG.

489. 1884-87. Publications of the Sloane Society. v. 1-2. 8° London, 1884, 1887. v. 1: Fracastoro, Syphilis, translated [by John Lewis Milton] 1884. v. 2. Grünbeck, Pestilential uncleanness 1887. See *Baumgartner & Fulton* Bibliography of poem Syphilis by Fracastoro 1935, no. 79.

490. **1884-87. Sanitary (The) World.** Food, health, water supply and sanitary science. n. 1-171; v. 1-7. fol. London, 9 Feb. 1884–13 May 1887. From 6 Sept. 1884 incorporates Water 1883. SG.

491. **1884-89. Indian (The) Medical Journal.** (Monthly) v. 3-6; n. s., v. 1-3. 8° Allahabad, 1884; Calcutta, 1885-1887; Lahore, 1887-1889. SG.
Continuation of Proc. N. W. Province & Oudh branch BMA 1882.

492. **1884-95. Asclepiad (The),** by B. W. Richardson. (Quarterly) v. 1-11. 8° London, 1884-1895. From v. 8, 1891, also called 2. s. RCS, SG.

493. **1884-95. Journal d'Hygiène populaire.** Organe officiel de la Société d'hygiène de la province de Québec. (Semi-monthly) v. 1-11. 8° Montréal, 1884-1895. SG, MacD.

494. **1884-99. Year-Book (The) of Treatment for 1884-1899.** 12° London, 1884-1899. No issue for 1887; 1888 and after, each vol. covers the previous year. RCS, SG.

495. **1884-1901. Scientific Memoirs** by Medical Officers of the Army of India. Parts 1-12, 1884-1901. 4° Calcutta, 1885-1901.
Continued as Scientific memoirs by officers of the med. & san. depts. of the govt. of India 1902. WL 19980A, RCS, SG.

496. **1884-1902. Proceedings** of the Society for the Study and cure of Inebriety. 8° London, July 1884-1902. WL 16920, RCS (incomplete).

497. **1884-1910. Transactions** of the South Indian branch of the British Medical Association. v. 1-16, 1884/86-1910. 8° Madras, 1887-1910. WL 21675, SG, Crawford.

498. **1884-1916. Medical (The) Chronicle.** A monthly record of the progress of the medical sciences. v. 1-61. 8° Manchester, 1884-1916. v. 1-19, 1884–March 1894; n. s., v. 1-10, April 1894–March 1899; 3. s., v. 1-4, April 1899–March 1901; 4. s., v. 1-30, n. 5, April 1901–April 1916. 4. s., v. 30 covers misprinted '40'; v. 30, n. 4 & 5 double numbers, Jan.–Feb. and March–April 1916. v. 60-61, London & Manchester. WL 13003, RCS, SG.

499. **1884—. South African (The) Medical Journal** (i): v. 1-5. 4° East London, 1884-1886, Cathcart, 1886-1890.
(ii) v. 1-7. 4° Cape Town, 1893-1890.
(iii) v. 6—. 4° Cape Town, 1932–.
Continuation of Journal of the Medical Association of S. A. 1927-31.
Sub-title: Suid-Afrikaanse Tydskrif vir Geneeskunde.
(i) and (ii) SG, BM (iii) WL 20359, RCS.

500. **1884—. Speculum (The).** A journal of the Melbourne medical students [Melbourne University medical student society]. n. 1—. 8° Melbourne, July 1884—. Pitt, SG (incomplete).

501. **1885-6. Man:** a popular journal of public and individual health. Title Nov. 1885–Aug. 1886 of Sanitary Journal, Toronto, 1874.

502. **1885-6. Medical (The) Reformer.** A monthly medical journal. n. 1-20. 8° Agra, March 1885–Oct. 1886. Urdu text. SG.

503. **1885-8. Journal of the Health Society** for Calcutta and its suburbs. v. 1-4, n. 2. 8° Calcutta, March 1885–Oct. 1888. SG.

504. **1885-92. Hospital (The) Gazette and Students' Journal,** a weekly review. v. 13-20 (n. s., v. 1-8). 8° London, 1885-1892.
Continuation of Students' Journal and Hospital Gazette 1873.
Continued in Medical Times and Hospital Gazette 1893. Revived as Hospital Gazette 1904. BM, SG.

505. **1885-95. Provincial (The) Medical Journal.** A monthly review. v. 4, n. 43-48; v. 5-14. 4° Leicester, 1885-1895.
Continuation of Midland Medical Miscellany 1882. RCS, SG.

506. **1885-1907. British (The) Gynaecological Journal:** being the Journal of the British Gynaecological Society. (Quarterly) n. 1-89, v. 1-23. 8° London, April 1885–May 1907. N. 89, May 1907, is called v. 23 and also 'Supplement to v. 22, Proceedings of the British Gynaecological Society.'
Merged in Proceedings of the Royal Society of Medicine 1907. WL 3557, RCS, SG.

507. **1885-1907. Family (The) Doctor and People's Medical Adviser.** v. 1-44. 4° London, 7 March 1885-1907. SG.

508. 1885—. **Medical Adviser and Farm Help.** v. 1—. Bournanville, Ontario, 1885—. MacD.

509. 1885—. **Westminster (The) Hospital Reports.** (Irregular) v. 1—. 8° London, 1885—. WL 22956, RCS, SG.

510. 1886-87. **Medical (The) and Professional Review,** a monthly epitome. n. 1-4. 4° London, Oct. 1886–Jany. 1887. BM (n. 1), SG (n. 4).

1886-88. Canada Health Journal. See 1880.

511. 1886-89. **Australian Health Society,** Melbourne. Health Lectures for the People. 1.-2. series, 2 v. 12° Melbourne, 1886-1889. SG.

512. 1886-89. **Transactions** of the Hongkong Medical Society. v. 1, Sept. 1886–May 1889. 8° Hongkong, 1889. RCS, SG.

513. 1886-98. **Quarterly Review of Deaf-mute Education.** v. 1-5. 8° London, Jany. 1886-1898. SG.

514. 1886-1921. **Hospital (The).** (Weekly) v. 1-70. 8° London, Oct. 1886–Sept. 1921. Nos. 1073, v. 42, 6 April 1907 to n. 1316, v. 50, 30 Sept. 1911 called also N. S., n. 1-244, v. 1-9.

Supplements: Nursing Mirror 1888-1907; The Institutional Worker 14 Oct. 1911–2 April 1921; Christmas appeal special supplements; Hospital Sunday special supplements.

Continued as Hospital and Health Review, Oct. 1921. WL 9078, RCS (v. 9-70), SG.

515. 1886—. **Australasian (The) Journal of Pharmacy.** v. 1-34; n. s., v. 1—. 8° Melbourne, 1886-1919; 1920—. WL 2233, Pitt, SG.

Continuation of Australasian Chemist and Druggist 1878.

516. 1886—. **Chemist and Druggist of Australasia** [later: Chemist and Druggist and pharmacist of Australasia]. v. 1—. Melbourne 1886—. Pitt.

After 1920, v. 35 organ of Australian associations only, no longer of New Zealand also. Supplement see Optical News 1911-12.

Continuation of Australasian Chemist and Druggist 1878.

517. 1886—. **Journal (The) of the Anthropological Society of Bombay.** v. 1—. 8° Bombay, 1886—. WL 11029, BM and SG incomplete.

518. 1887. **Journal (The) of Hydrotherapeutics: Spas and Health Resorts.** v. 1, n. 1. 8° London, April 1887. SG.

519. 1887-8. **Australian Practitioner.** v. 1. Sydney, 1887-1888. Pitt (? error for 1877-8). See 419 above.

520. 1887-88. **Georgetown (The) Hospital Reports** for 1887. 1 v. 8° Demerara, 1888. SG.

Continued as British Guiana Medical Annual 1890.

521. 1887-88. **Magazine (The) of Health.** v. 1, n. 1-5. 8° London, Nov. 1887–March 1888. SG.

522. 1887-89. **Manitoba, Northwest and British Columbia Lancet.** A monthly journal. v. 1-2. 8° Winnipeg, 1887-1889.

Continued as Northern Lancet 1889. SG, MacD.

523. 1887-89. **Medical Science.** v. 1-2, n. 4. Toronto, Nov. 1887–Feb. 1889. MacD.

524. 1887-92. **Gazette (La) médicale de Montréal.** Revue mensuelle de médecine v. 1-6. 8° Montreal, 1887-1892. In Jany. 1893 united with Union méd. du Canada 1872. SG, MacD.

525. 1887-93. **Ceylon (The) Medical Journal.** v. 1-5. 4° Colombo, 1887/8–1892/3. SG (v. 1), Pitt (v. 5). BM.

526. 1887-1903. **Transactions** of the Intercolonial Medical Congress of Australasia. 1, Adelaide, Aug.–Sept. 1887. 8° 1888.

Intercolonial Medical Congress of Australasia.
Transactions.
2, Melbourne, Jany. 1889. 8° 1889.
3, Sydney, Sept. 1892. 8° 1893.
4, Dunedin, 1896.
5, Brisbane, 1899.
6, Hobart, Feb. 1902. 8° 1903.

Continued as Australasian Medical Congress 1905.

WL 10104, Pitt, RCS (incomplete), SG.

1887—. Guy's Hospital Gazette. See 1872.

527. **1887—. Journal (The) of Laryngology and Rhinology.** (Monthly) v. 1—. 8° London, Jany. 1887—. From 1892, v. 6 called Journal of Laryngology, Rhinology and Otology; from 1921, v. 36 called Journal of Laryngology and Otology. Index v. 36-45, 1921-30, 1932. WL 11290, RCS, SG.

528. **1887—. New Zealand (The) Medical Journal.** v. 1-9. 8° Dunedin, Sept. 1887–Oct. 1896. Merged in Australasian Medical Gazette 1881.
Revived: v. 1—. 8° Wellington, Aug. 1900—.
WL 15109, RCS, Pitt, SG.

529. **1887—. Nursing Notes.** n. 7—. 8° London, Dec. 1887—. WL 15368, BM. n. 1-6 were issued in 'Woman.'

530. **1887—. Proceedings** of the Anatomical Society of Great Britain and Ireland. Issued in Journal of Anatomy & Physiology from 1887-8, v. 22 (after 1916, v. 51, Journal of Anatomy). RCS, SG.

1887—. Vegetarian Messenger. See 1849.

531. **1888-89. Diet and Hygiene.** A monthly magazine of food, dietetics and health. v. 1-2. 8° London, 1888-89. BM, RCS & SG (incomplete).
Continued as Hygiene 1890.

532. **1888-89. Health (The) Journal,** a quarterly review. July 1888–Dec. 1889. Title of Sanitary Journal 1874.

533. **1888-90. Illustrated (The) Medical News.** (Weekly) v. 1-6. fol. London, 29 Sept. 1888–1 Feb. 1890. RCS, SG.

534. **1888-91. London (The) Medical Recorder,** a monthly review. n. s., n. 1-41, v. 1-4. 8° London, 20 Jany. 1888–20 May 1891.
Continuation of London Medical Record 1873. RCS, SG.

535. **1888-98. Pharmaceutical Journal of New South Wales.** (Later: of Australasia.) v. 1-11. 4° Sydney, 1888-1898. Pitt, Bolton 5466 & 7453/4. Bolton states that v. 1 incorporates 'The Australian Chemists' Review' 1 v., 1888.

536. **1888-1902. Nursing Record.** v. 1-28. 8° London, 5 April 1888–28 June 1902. WL 15369, BM, SG. Nov. & Dec. 1889 called 'International Nursing Record.'
Continued as British Journal of Nursing 1902.

537. **1888-1907. Hospital (The) Nursing Mirror,** being the extra nursing supplement of 'The Hospital' newspaper (1886). 8° London, 1888-1907.
From Oct. 1901 (Hospital v. 31) called 'Hospital (The) Nursing section.' Ends with Hospital v. 41. RCS, SG.

538. **1888-1910. Maritime (The) Medical News.** A journal of medicine, surgery and obstetrics. v. 1-22. 4° & 8° Halifax, Nova Scotia, Nov. 1888–Dec. 1910. Incorporated with Montreal Medical Journal 1888 to form Canadian Medical Association Journal 1911. Index 1-10 in v. 11. WL 12692 (no registration), SG, MacD.

539. **1888-1910. Montreal (The) Medical Journal.** (Monthly) v. 17-39. 8° Montreal, July 1888–Dec. 1910. WL 14549, RCS, SG, MacD.
Continuation of Canada Medical and Surgical Journal 1872.
Continued in Canadian Medical Association Journal 1911, incorporating Maritime Medical News 1888.

540. **1888—. British (The) Journal of Dermatology** (and Syphilis, from 1917, v. 29). v. 1—. 8° London, Nov. 1888—. WL 3565, RCS, SG.
Epitome:— An epitomised index of dermatological literature an epitome of v. 1 to 21 inclusive of the Brit. J. of Derm. by A. Winkelried Williams, 8° London, 1910.

541. **1888—. Public Health,** the Journal of the Society of Medical Officers of Health. v. 1—. 4° London, May 1888—. WL 17288, RCS, SG.
Continuation of Transactions of the Soc. of M.O.H. 1879.

542. **1889-90. English (The) Eclectic Medical Practitioner** and journal of the society of united medical herbalists of Great Britain. v. 1, n. 1-2. 8° Hyde, Nov. 1889–Feb. 1890. SG.

543. **1889-90. Studies in Clinical Medicine:** record of cases . . . in the Royal Infirmary, by Byrom Bramwell. (Fortnightly) v. 1, n. 1-20. 4° Edinburgh and London, 3 May 1889–21 March 1890. SG, Pitt (v. 1-2).
Continued as Clinical Studies 1902.

544. 1889-91. Proceedings and Transactions of the Pathological Society of Toronto. v. 1-2, 1889-90–1890-91. 8° Toronto 1890-1891. BM, RCS, SG, MacD.

545. 1889-92. Australian Botanic Practitioner and journal of the Australasian society of medical botanists. v. 1-3. Melbourne, 1889-1892. Pitt.

546. 1889-92. Northern Lancet (and Pharmacist, from July 1890). v. 3-5, n. 1. 8° Winnipeg, July 1889–April 1892. SG, MacD.
Continuation of Manitoba, North West & British Columbia Lancet 1887. Continued as Manitoba & West Canada Lancet, May 1897.

547. 1889-92. Tocsin (The): a journal of medical and general philosophy ("... of general and of medical philosophy," from n. 2). (Monthly) n. 1-30, v. 1-4; n. 31 = n. s., n. 1. 4° (n. 31, 8°) London, Jany. 1889–Oct. 1892. RCS, SG. v. 1, n. 1-2; v. 2, n. 13-24; v. 3, n. 25-28; v. 4, n. 29-30. n. 27, March 1891; n. 28 ('A quarterly journal . . .') July 1891; n. 29, Jany.; n. 30, March; n. 31, Oct. 1892.

548. 1889-93. Journal of British and Foreign health resorts. A monthly record ... (after 1891 quarterly). v. 1-4. 4° London, 17 Oct. 1889–Oct. 1893. BM, RCS (incomplete), SG.

549. 1889-1911. Archives of Surgery by Jonathan Hutchinson. (Quarterly) v. 1-11. July 1889–Oct. 1900. 8° London, 1889-1911. Index 1-11. n. 44 (Oct. 1900) issued in Dec. 1911 having "been printed off for several years and kept back by indecision as to formal announcement of conclusion and preparation of the general index." WL 1911, RCS, SG.

550. 1889—. Adelaide medical students' society review. (Irregular) n. 1—. Adelaide, May 1889—. Pitt.

551. 1889—. Dominion Dental Journal. (Quarterly) v. 1—. 8° Toronto, 1889—. From 1891 bi-monthly; from 1893 monthly. WL 7457, SG, MacD.

552. 1890. Madras Medical Record. v. 1, n. 1-3. 4° Madras, 1890. BM.

553. 1890. Medical Record. Title of Indian Medical Record. 1890—, v. 1, n. 1-11.

554. 1890. Mère (La) et l'enfant. (Monthly) v. 1, n. 1-7. 8° Montreal, May-Nov. 1890. SG, MacD.

555. 1890-91. Journal of the Leprosy Investigation Committee. (Half-yearly) v. 1, n. 1-4. 8° London, Aug. 1890–Dec. 1891. RCS, SG.

1890-92. Canada Health Journal. See 1880.

556. 1890-94. Hygiene. v. 3-8. 4° London, 1890-1894. BM, SG.
Continuation of Diet & Hygiene 1888.

557. 1890-98. Medical Reprints with original essays: Home, foreign and colonial: Illustrated. (Monthly) v. 1-8. 4° London, Feb. 1890–Jany. 1898. SG.

558. 1890—. British Guiana (The) Medical Annual, and Hospital Reports. (Irregular) v. 2—. 8° Demerara, 1890—. From 1896, v. 8 'and Hospital Reports' dropped.
Continuation of Georgetown Hospital Reports 1887. WL 3556, RCS, SG.

559. ? 1890—. Bulletin de la Société médicale de l'Ile Maurice. (Irregular) v. 1—. fol. & 8° Port Louis (circa 1890—). WL 5281A, Liverpool Univ. (2.-11. s, v. 24-47, 1906-30), SG (v. 5, 1895).

560. 1890—. Indian (The) Medical Record. v. 1, n. 12—. 4° Calcutta, 1890—. v. 1, n. 1-11 called Medical Record. WL 9945, RCS (incomplete), SG, Crawford. Supplement: Medical Register and Directory of the Indian Empire 1892; edit. 2, 1898. Monthly; 1893-98 fortnightly; 1899-1903 weekly; Jany.-March 1904, no issue; April 1904–March 1906 fortnightly; April 1906–Feb. 1908, no issue.

561. 1890—. Montreal Pharmaceutical Journal. v. 1—. Montreal, 1890—. WL 14550 (no registration), MacD.

1890—. Transactions of the Medical Society of London. See 1810.

562. 1891. Barbadoes Medical Annual. Barbadoes, 1891. BMA.

563. 1891. Leeward Islands (The) Medical Journal. 1 v. 8° London, 1891. BM. TD, SG.

563a. 1891. Monthly (The) Medical Review. n. 1-3. 8° London, 13 Jany.-13 March 1891. BM.

564. 1891. Northern (The) Health Messenger. Title of n. 1-5, v. 1 of Health Messenger 1891-98.

565. **1891. Physique:** a journal of physical education. v. 1, n. 1-8. 8° London, Feb.–Sept. 1891. SG.

565a. **1891.** Psychological (The) **Magazine.** v. 1-2. 4° London, 1891. BM.

566. **1891. Studies from the Physiological Laboratory of Owens College,** Manchester. v. 1. 8° Manchester, 1891. Manchester medical library, SG. [A vol. of reprints had been issued, under this title, in 1877.]

566a. **1891-92. Homoeopath (The).** v. 1, n. 1-6. 4° London, 1891-1892. BM.

566b. **1891-92. Hygienic (The) Advertiser.** n. 1-19. 8° London, 1891-1892. BM.

567. **1891-92. Transactions (The)** of the Pathological Society of Manchester. v. 1, Oct. 1891–May 1892. 8° Manchester. RCS, SG.

568. **1891-95. Health (The) Record.** An Irish journal of sanitary science. v. 1-4. 4° Dublin, March 1891–Feb. 1895. RCP, SG.

569. **1891-95. Popular (The) Medical Monthly.** v. 1-5. 4° London, April 1891–Sept. 1895. BM, SG.
Continued as Nursing World 1895.

570. **1891-95. Transactions** of the Burma branch of the British Medical Association. Rangoon. 1891-1895. BMA.

571. **1891-98. Health (The) Messenger.** Food and cookery. v. 1-12. 8° London, August 1891–May 1898. SG. BM. n. 1-5 called Northern Health Messenger.

572. **1891-99. London (The) Homoeopathic Hospital Reports.** v. 1-7. 8° London, 1891-1899. BM, RCS.

573. **1891-1900. Studies in Anatomy** from the anatomical department of the Owens College. v. 1-2. 8° Manchester, 1891, 1900. RCS, SG.
Continued as Studies . . . Univ. of Manchester 1906, v. 3.

574. **1891-1906. Transactions** of the Grant College Medical Society, Bombay. 8° Bombay, 1891-1906. WL 21499, RCS (1891), SG, Pitt.

575. **1891-1907. Indian (The) Homoeopathic Review.** A monthly journal. v. 4-17. 8° Calcutta, May 1891–Dec. 1907 'current.' SG. WL 9938 (no registration).

576. **1891-1907. Transactions** of the British Laryngological and Rhinological Association. v. 1 etc. (1891-1907). 8° London, 1892-1907. After v. 4 numbering dropped and from 1895 called Trans. of the British Laryngological, Rhinological and Otological Association. Merged in Proceedings Royal Soc. of Medicine 1907. WL 21442, SG.

577. **1891-1914. Therapist (The).** A monthly journal for the physician and chemist. v. 1-24. 8° London, 1891-1914. WL 21188, BM, SG.

578. **1891-1918. Nurses' Journal.** London, 1891-1918. WL 15364.

579. **1891—. Caledonian (The) Medical Journal.** (Quarterly) v. 1—. 8° Rochester, Dec. 1891-1894; Glasgow, 1894—. WL 5818, SG.

580. **1891—. St. Thomas's Hospital (The) Gazette.** v. 1—. 8° London, 1891—. WL 19649, RCS, SG.

581. **1892. Dental Patients.** 4° London, 1 Aug.–1 Oct. 1892. BM.

582. **1892. Dissertations** by eminent members of the Royal Medical Society. 1 v. 8° Edinburgh, 1892. SG.

583. **1892. Doctors' Magazine.** A monthly journal of Indian and foreign medicine. v. 1. 8° Tardeo, Bombay, 1892. SG. BM.
Continued as Indian Medico-chirurgical Review 1893.

584. **1892. Jamsetji Jijibhai Hospital,** Bombay. Hospital reports by the medical and professional staff of the Jamsetji Jijibhai Hospital and Grant medical College. v. 1. 8° Bombay, 1892. SG.

585. **1892. Museum Journal** of the Royal College of Surgeons of England. Part 1. 8° London, 1892. RCS.

586. **1892-93. Food, Drugs and Drink.** London, 1892-1893. BMA.

587. **1892-93. Good Health.** A weekly paper devoted to food, drink, medicine and sanitation. v. 1-2. 4° London, 8 Oct. 1892–30 Sept. 1893. SG.

588. **1892-93. Homoeopathic (The) Medical Record.** (Monthly) v. 1-2. 8° Calcutta, 1892-1893. SG (fragment).

588a. **1892-93. Phrenological (The) Record.** 8° London, 1892-1893. BM.

589. **1892-93. Sanitation in the West.** A monthly record of sanitary progress. v. 1, n. 1-18. 8° Tiverton, March 1892–August 1893. SG.

590. **1892-93. Sheffield (The) Medical Journal.** A quarterly review of the medical sciences for Yorkshire and adjoining counties. v. 1. 8° Sheffield, Oct. 1892–July 1893. WL 17518, RCS, SG.
Continued as Quarterly Medical Journal for Yorkshire 1893.

591. **1892-95. Medical (The) Reporter.** v. 1-6, n. 8. sm. 4° Calcutta, Jany. 1892–16 Oct. 1895. (Monthly; from Jany. 1894 fortnightly.) RCS, SG.
Continued as Indian Lancet 1895.

592. **1892-95. Ontario Medical Journal.** A monthly review. v. 1-3. sm. 4° Toronto, Aug. 1892–June 1895. SG, MacD.
Incorporated into Dominion Medical Monthly (1893).

593. **1892-97. Medical (The) Pioneer.** The official organ of the British Medical Temperance Association. v. 1-5. sm. 4° London, Oct. 1892–Dec. 1897. RCS, SG.
Continuation of Medical Temperance Journal 1869.
Continued as Medical Temperance Review 1898.

594. **1892-97. Medical (The) Week.** English edition of Semaine médicale. v. 1-5. fol. Paris, 1 Dec. 1892–1897. SG.

595. **1892-1915. Medical (The) Magazine.** A monthly review . . . v. 1-24. 8° London, July 1892-1915. WL 13041, RCS, SG.

596. **1892-1917. Modern Medicine.** London, 1892-1917. WL 14275, BM.

597. **1892—. Clinical (The) Journal.** A weekly record . . . (From 1933 monthly.) v. 1—. 4° London, 1892—. WL 6418, RCS, SG.

598. **1892—. Journal (The) of Pathology and Bacteriology.** v. 1—. 8° Edinburgh and London, May 1892-1907, v. 1-11; Cambridge, 1907-1920, v. 12-23; Edinburgh & London, 1921-1934, v. 24-38; London & Edinburgh, 1934—, v. 39—. Index 1-25. WL 11431, RCS, SG. From 1907, v. 12 official journal of the Pathological Society of Great Britain and Ireland.

599. **1892—. Journal (The) of State Medicine.** The official organ of the British Institute of Public Health. v. 1-13, n. 4. 8° London, Aug. 1892–April 1905.
Continued as Journal of Preventive Medicine. v. 13, n. 5—. v. 14, May 1905–Dec. 1906 and Journal of the Royal Institute of Public Health 1907-1911, v. 15-19, and 1937—.
Revived: v. 20-45. 8° London, 1912-37. WL 11560, RCS, SG. Monthly from v. 5; v. 1-4 irregular. 'British Institute of Public Health' became 'Royal Inst. of P. H.' in July 1897, v. 5, n. 7. Sub-title varies at v. 15, 20, 21, dropped at v. 30.

600. **1892—. St. George's Hospital Gazette.** v. 1—. 8° London, 1892—. WL 19640A, RCS (from v. 3).

601. **1892—. Transactions of the North of England Obstetrical and Gynaecological Society.** 1892— (vols. not numbered). 8° Manchester, 1892-1900; Leeds, 1901-1902; Liverpool, 1903—. WL 21624.

601a. **1893. Hygienic (The) Review.** n. s., v. 2. 8° London, July–Dec. 1893. BM.
Continued as Vegetarian Review 1894.

601b. **1893. Sanitary (The) Officer.** 8° London, 1893. BM.

602. **1893-96. Indian (The) Medico-chirurgical Review.** v. 1-4, n. 9. 8° Bombay and London, Jany. 1893–Sept. 1896.
Continuation of Doctors' Magazine 1892. BM, RCS (fragmentary), SG.

1893-99. South African Medical Journal. See 1884.

603. **1893-1900. Edinburgh Hospital Reports.** v. 1-6. 8° Edinburgh, 1893-1900. WL 7598, RCS, SG. (Royal Infirmary; R. Hospital for Sick Children; R. Maternity and Simpson Memorial Hospital.)

604. **1893-1900. Food and Sanitation.** London, 1893-1900. BMA.

605. **1893-1903. King's College Hospital Reports, . . . King's College Hospital and the Medical Department of King's College.** v. 1-8, 1893-1901. 8° London, 1895-1903. WL 11790, RCS, SG.

606. **1893-1903. Quarterly (The) Medical Journal for Yorkshire and adjoining counties.** v. 2-11. 8° Sheffield, Oct. 1893–Aug. 1903. WL 17518, RCS, SG.
Continuation of Sheffield medical Journal 1892-93.

607. **1893-1907. Medical (The) Times and Hospital Gazette.** (Weekly) v. 21-35. 4° London, 7 Jany. 1893–28 Dec. 1907. WL 13074, RCS, SG.
Continuation of Hospital Gazette 1885.
Continued as Medical Times 1908, v. 36.

608. **1893-1907. Proceedings** of the Laryngological Society of London. v. 1-14, 1893/4–1906/7. 8° London, 1895-1907. WL 16789, RCS, SG.
Merged in Proceedings Royal Soc. of Med. 1907.

609. **1893-1910. Journal (The) of the British Homoeopathic Society.** (Quarterly) n. s., v. 1-18. 8° London, 1893-1910. WL 11084, BM.
Continuation of Annals & Trans. of Brit. Homoeop. Soc. 1860.

610. **1893-1914. Northumberland (The) and Durham Medical Journal.** (Quarterly) v. 1-22. 8° Newcastle-upon-Tyne, Jany. 1893-1914. WL 15243, SG.
Continuation of Reports of Proceedings of Northumberland & Durham Med. Soc. 1860.
Continued as Newcastle-upon-Tyne & Northern Co.'s Med. Jour. 1920.

611. **1893-1917. Doctor.** London, 1893-1917. WL 7440, BM.

612. **1893-1921. Dominion Medical Monthly.** v. 1-56. 8° Toronto, July 1893-1917. WL 7459, SG, MacD. From July 1895, v. 5 incorporates Ontario medical Journal 1892.
Continued as National Hygiene and Public Welfare 1922.

613. **1893—. Proceedings** of the Brighton and Sussex medico-chirurgical society. Established 1847. Session 1893/4—. 8° Brighton, 1894—. WL 16674. (First issued with the 47th annual report.)

614. **1893—. St. Bartholomew's Hospital Journal.** v. 1—. 8° London, Oct. 1893—. WL 19639, RCS, SG.

615. **1893—. Transactions and Annual Report** of the West Kent Medico-Chirurgical Society, instituted Oct. 1856. 1892/3—, Report 37—. 8° Blackheath, 1893—. WL 21695, SG. Formerly Annual Report [which contained abstracts of proceedings.] Between 1923/4, Report 68 and 1932/3, Report 77 only 'Reports of Council' were issued.

616. **1894. Descriptive (A) Catalogue of the Clinical Museum** and Journal of Proceedings. By Jonathan Hutchinson. Part. 1. 8° London, 1894. RCS.

617. **1894. Indian (The) Journal of Pharmacy.** A monthly record . . . India, Burmah, China and Japan. v. 1, n. 1-4. 8° Calcutta, Jany.–April 1894. SG.

618. **1894. Linacre Reports.** London, 1894. BMA.

619. **1894. Progress (The) of Medical Science.** Reprints. (Quarterly) v. 1, n. 1. 8° Bombay, April 1894. SG.

620. **1894-95. Teratologia:** quarterly contributions to antenatal pathology with reviews of the current literature of the subject. By J. W. Ballantyne. v. 1-2. 8° London and Edinburgh, 1894-1895. RCS, SG.

621. **1894-95. Transactions** of the First Indian Medical Congress held at St. Xavier's College, Calcutta 24th to 29th December 1894. 1 v. 4° Calcutta, 1895. RCS, SG.

622. **1894-96. Intercolonial Quarterly Journal of Medicine and Surgery.** v. 1-2. 8° Melbourne, 1894-1896. RCS, Pitt.
Continued in Intercolonial med. Jour. of Australasia 1896.

622a. **1894-97. Vegetarian (The) Review.** 8° London, Jany. 1894–Dec. 1897. BM.
Continuation of Hygienic Review 1893. Incorporated in Vegetarian Messenger (1849).

623. **1894-98. Proceedings (The)** of the Life Assurance Medical Association [founded 1893]. 1894-1897. 8° London, 1896-1898. BMA, SG.
Continued as Transactions of the Life Assurance Medical Officers Association 1898.

624. **1894-1901. Transactions** of the British Orthopaedic Society. v. 1-4, 1894/5–1899/1900. 8° Birmingham, 1896-1901. RCS, SG.

625. **1894-1904. Transactions** of the Dermatological Society of Great Britain and Ireland. v. 1-10, 1894/5–1903/04. 8° London. WL 21471, RCS, SG. Merged in Proc. R. S. M. 1907.

626. **1894-1911. Phonographic (The) Record** of Clinical Teaching and Medical Science. (Monthly) v. 1-17. 12° London, June 1894-1911. WL 16193C, RCS, SG.

627. 1894-1923. Clinique (La). Revue de médecine, chirurgie, gynécologie, ophthalmologie, laryngologie, otologie, rhinologie et pharmacie. (Monthly) v. 1-7; n. s., v. 1-13. 4° & 8° Montreal, July 1894–Jany. 1900; April 1910-1923. WL 6426 (no registration), SG, MacD.

628. 1894—. First Aid and St. John's Ambulance Gazette. London, 1894—. WL 8451, BM.

629. 1894—. Journal of the Sanitary Institute. (Quarterly) v. 15—. 8° London, 1894—. From 1904, v. 25 'Journal of the Royal Sanitary Institute.' Continuation of Transactions of the Sanitary Institute 1879. WL 11498, SG.

630. 1894—. London Hospital Gazette. v. 1—. 8° London 1894—. WL 12375, RCS.

630a. 1895. Nursing (The) World. v. 6. 8° London, 1895. BM.
Continuation of Popular medical Monthly 1891.
Continued as Nursing News 1896.

631. 1895-96. Australasian (The) Homoeopathic Medical Gazette. (Quarterly) v. 1, n. 1-4. 4° Dunedin, July 1895–April 1896. Pitt, SG.

632. 1895-96. Clinical Sketches illustrative of practical medicine and surgery. (Monthly) n. 1-15, v. 1-3. 4° London, Jany. 1895–March 1896. BM, RCS (fragment), SG.

633. 1895-96. Transactions of the British Balneological and Climatological Society. 1895/96. 8° London, 1896. RCS. Cont. as **667**.

634. 1895-97. Chikitsaka-o-Samalochaka. A monthly journal of medicine. (Bengali text.) v. 1-3. 8° Calcutta, 1895-1897. SG (incomplete).

635. 1895-97. Reading Pathological Society. Transactions. v. 1-2, 1895/96–1896/97. 8° Reading, 1896-1897. BM, SG. See *Hurry* (J. B.) History of the Reading Path. Soc. 1909, pp. 106-111.

636. 1895-98. Canadian (The) Medical Review. (Monthly) v. 1-3. 8° Toronto, 1895-1898. SG, MacD. Joined with Canadian Practitioner 1883 to form Canadian Practitioner and Review 1899.

637. 1895-1908. Indian (The) Lancet (late The Medical Reporter). The organ of the Medical Association of India. A fortnightly journal. v. 6, n. 9-31, n. 17. 4° Calcutta, 1895-1908. WL 9942, RCS (both incomplete), Pitt, SG, Crawford 'current 1914.'
Continuation of Medical Reporter 1892.

638. 1895-1929. Transactions of the Ulster Medical Society. 8° Belfast, 1895-1929. WL 21688.
Continued as Ulster Medical Journal 1932. From 1873-94 the Society (founded 1862) published its Transactions in the Dublin Journal of med. Sci. (1872). See R. H. Hunter 'History of the Ulster med. Soc.' in *Ulster med. J.* 1936, v, 107 & 178.

639. 1895—. Magazine of the London (Royal Free Hospital) School of Medicine for Women. v. 1—. 8° London, 1895—. WL 12531, BM, RCS (incomplete).

640. 1895—. Medical Missions in India. (Quarterly) 8° Ajmir, 1895-1898; Pokhuria, Manbhum, 1899—. Crawford, WL 13044, TD.

641. 1895—. Queen's (The) Medical Magazine. Journal of the Birmingham Medical School. v. 1—. 8° Birmingham, 1895—. From 1921 called n. s. WL 17531a.

642. 1895—. St. Mary's Hospital Gazette. v. 1—. 8° London, 1895—. WL 19647, RCS, SG.

643. 1895—. Sydney University Medical Society:—Hermes, medical supplement; later—Journal of the University of Sydney medical Society; later—Sydney University Medical Journal. v. 1-9; n. s., v. 1—. Sydney 1895/6–1907; 1908—. Pitt.

644. 1895—. Transactions of the Medico-chirurgical Society of Glasgow. v. 1—, 1895-97—. 8° Glasgow, 1897—. Transactions of the Glasgow Pathological and Clinical Society, 1883, amalgamated 1907. No issue between 1914 (v. 13) and 1919-20 (1921, v. 14). 'Royal' from 1919. From 1932-33, v. 27 also included in Glasgow Medical Journal (1828). WL 21583, RCS, SG.

645. **1896-97. Archives of Clinical Skiagraphy,** by Sydney Rowland. v. 1, 3 n. 4° London, May 1896–April 1897. RCS, SG. n. 3 called Archives of Skiagraphy.
Continued as Archives of the Röntgen Ray 1897.

646. **1896-97. Australasian Anthropological Journal.** n. 1-6. Sydney, 1896-1897. WL 19955, Pitt.
Continued as Science of Man 1898.

647. **1896-97. Homoeopathic Messenger,** . . . in connection with Grace Hospital. v. 1-4, n. 6. 8° Toronto, 15 Jany. 1896–15 July 1897. SG, MacD.

647a. **1896-97. Nursing (The) News.** v. 7-9. 8° London, 1896-1897. BM.
Continuation of Nursing World 1895.

648. **1896-1900. Medical (The) World,** a weekly record. n. 1-168; v. 1-4. 8° London, 21 Nov. 1896–July 1900. v. 4 monthly. SG.

649. **1896-1900. Scalpel (The).** A monthly journal of medicine and surgery. v. 1-5. 4° London, 1896-1900. WL 19771, RCS, SG.

650. **1896-1903. Kingston Medical Quarterly.** v. 1-7. 8° Kingston, Ontario, Oct. 1896–July 1903. WL 11791 (no registration) & 17532, SG, MacD.
Continued as Queen's Medical Quarterly 1903.

651. **1896-1904. Popular Phrenologist.** v. 1-9. 8° London, Jany. 1896–Dec. 1904. BM.

652. **1896-1909. Intercolonial Medical Journal of Australasia.** (Monthly) v. 1-14. 8° Melbourne, Jany. 1896-1909. Union of Australian medical Journal (1856) and Intercolonial Quarterly Journal of Medicine and Surgery (1894).
Continued as Australian medical Journal 1910 (see 1856). WL 10105, RCS, SG, Pitt.

653. **1896-1913. Transactions** of the Glasgow Obstetrical and Gynaecological Society. v. 1-9, 1896/98–1911/12. 8° Glasgow, 1898-1913. WL 21497, RCS, SG.

1896-1914. Transactions of the Hunterian Society. See 1831.

654. **1896—. Transactions** of the Liverpool Odontological Society. 1896/97—. 8° Liverpool, 1897—. WL 21548, Liverpool University.

655. **1896—. West London Medical Journal.** Quarterly. v. 1—. 8° London, Jany. 1896—. WL 22888, RCS, SG.
Continuation of Proceedings of the West London medico-chir. Soc. 1882. n. 1 (Jany. 1896) includes Proceedings of Oct. 1895.

656. **1897. Archives of Skiagraphy.** Title of n. 3 of Archives of Clinical Skiagraphy 1896/7.

657. **1897. Transactions** of the British Institute of Preventive Medicine. 1. s. 8° London, 1897. RCS, SG.
Continued as Trans. of the Jenner Institute 1899.

658. **1897-98. Hunterian (The) Journal,** being the Transactions of the Hunterian Society. 79. session, n. 1-3. 8° London, Nov. 1897, April & Nov. 1898. RCS, SG. General title-page 'Transactions of the Hunterian Soc.' See 1831.

659. **1897-99. Manitoba (The) and West Canada Lancet.** (Monthly) v. 5-6. 8° Winnipeg, May 1897–March 1899. SG, MacD.
Continuation of Northern Lancet & Pharmacist 1889.

660. **1897-1902. Food and Health.** A supplement to the Sanitary Record (1874). n. 1-63. 8° London, 1897-1902. SG.

661. **1897-1902. Montreal Homoeopathic Record.** (Monthly) v. 1-7. 8° Montreal, 1897-1902. SG (incomplete), MacD.

662. **1897-1904. Revue (La) Médicale.** (Weekly) v. 1-3. 4° Quebec, 7 July 1897-1899; Montreal, 1899-1900.
Continued as: Revue (La) Médicale du Canada. v. 4-8. 4° Montreal, 1900–2 Nov. 1904. WL 19179 & 19183 (no registrations), SG, MacD. (change of title 1901).

663. **1897-1906. Public (The) Health Engineer.** v. 1-18. fol. London, 15 May 1897-1906. WL 17292, SG.

664. **1897-1906. Treatment.** A journal of practical medicine and surgery. (Semi-monthly) v. 1-10. 8° London, 11 March 1897–Dec. 1906. WL 21771, RCS, SG.

665. **1897-1908. Scottish (The) Medical and Surgical Journal.** (Monthly) v. 1-22. 8° Edinburgh, 1897-1908. WL 20011, RCS, SG. Merged in Edinburgh Medical Journal (1855).

666. **1897-1908. Transactions (The) of the Society of Anaesthetists.** v. 1-9, 1897/8–1907/8. 8° London, 1898-1908. WL 21665, RCS, SG. Merged in Proc. R. S. M. 1907.

667. **1897-1910. Journal (The) of Balneology and Climatology.** Quarterly. v. 1-13. 8° London, 1897-1910. Index 1-13. WL 11057, RCS, SG. Merged in Proc. R. S. M. (1907). Cont. of 633.

668. **1897-1910. Phonographic (The) Medical Library.** v. 1-5. 12° London, 1897-1910. WL 16193A, Manchester Medical Library.

669. **1897-1914. Clinical Excerpts.** v. 1-18. 8° London 1897-1914. WL 6416, BM & RCS (incomplete).

670. **1897-1915. Archives of the Röntgen Ray.** v. 2-19, 1897/8–1914/5. 4° London, 1897-1915. WL 1904, RCS, SG. Supplement 1897: 'Radiography in marine zoology—the British echinodermata.'
Continuation of Archives of Clinical Skiagraphy 1896.
Continued as Archives of Radiology & Electrotherapy 1915.

671. **1897-1920. Guyoscope (The).** v. 1, n. 1-10, v. 2, n. 11-18; n. s., v. 1, n. 1-6; 3. s., n. 1-2. 8° London, 13 Jany. 1897-1898; Dec. 1905–May 1906; Dec. 1919–28 April 1920. Guy's Hospital (Wills Library).

672. **1897—. Australian (The) Journal of Dentistry.** A monthly review. v. 1—. 8° Melbourne 1897—. WL 2245, SG, Pitt.

673. **1897—. Canadian (The) Journal of Medicine and Surgery.** (Monthly) v. 1—. 8° Toronto, 1897—. WL 5898, SG, MacD. From 1931 'incorporating Canadian Health, also the Hospital World.' From 1935 incorporates Canada Lancet and Practitioner (1925).

674. **1897—. Middlesex Hospital (The) Journal.** v. 1—. 8° London, 1897—. WL 13653, RCS, SG.

675. **1898. Australian Anthropologist.** v. 1, n. 1. Brisbane, 1898. Pitt.

676. **1898. Medical Replies and Home Adviser.** v. 1, n. 1. 8° London, 1898. BM.

677. **1898. Weekly (The) Dentist.** v. 1, n. 1-12. 8° London, 6 Oct.–22 Dec. 1898. Radcliffe. Incorporated in Dentist 1898-99, v. 2.

678. **1898-99. Dentist (The):** an independent journal. n. 1-65; v. 1-2, n. 53. 8° London, Jany. 1898–28 Dec. 1899. (v. 1 monthly; v. 2 weekly.) WL 7161, Radcliffe, RCS (incomplete). v. 2 incorporates Weekly Dentist 1898. Incorporated in British Dental Journal 1898-1900.

679. **1898-99. Medical (The) and Surgical Review of Reviews,** a monthly summary. v. 1-2, n. 10. 4° London, Oct. 1898–July 1899. BM, RCS, SG.
Continued as Medical Review, v. 2, n. 11—, Aug. 1899—.

679a. **1898-99. Molar (The).** n. 1-5. 4° London, 1898-1899. BM.

680. **1898-1900. British Dental Journal.** v. 1-3, n. 38. 4° London, 1898-1900. v. 3 incorporates Dentist (1898-99). BM, Radcliffe, RCS (fragments).

681. **1898-1901. Glasgow Hospital Reports.** v. 1-3. 8° Glasgow, 1898-1901. WL 9207, SG.

682. **1898-1904. South African Journal of Health.** Cape Town 1898-1904. WL 20354, BM.

683. **1898-1906. Thompson Yates (The) Laboratories Report.** v. 1-7, pt. 1. 4° Liverpool, 1898-1906. From 1903, v. 5 called Thompson Yates and Johnston Laboratories Report, n. s. In 1934 a 3. series was issued: Thompson Yates Laboratory Reports, Pathological 1930/34, 3. s.
Continued in Annals of Tropical Medicine 1907. WL 21191 and 18622E, TD 747, RCS, SG.

684. **1898-1907. Medical (The) Guild Quarterly.** n. 1-38. 4° Manchester, 1 July 1898–Dec. 1907. Manchester Medical Library, WL 13023a.

685. **1898-1910. Herald of Health.** (Later—Australasian Good Health; later—

Good Health; later—Australasian Health Magazine.) v. 1-13. Melbourne, Sydney and Corrabong. 1898-1910. Pitt.
Continued as Life and Health 1911.

683. **1898-1913. Science of Man** (Royal Anthropological Society of Australasia). n. s., v. 1-14, 1898/9–1912/3. Sydney, 1899-1913. v. 12, n. 4-11 called v. 13. WL 19955, Pitt.
Continuation of Australasian Anthropological Journal 1896.

687. **1898-1915. Transactions** of the Life Assurance Medical Officers Association. 1898-1914. 8° London, 1900-1915. WL 21541.
Continuation of Proceedings 1894; continued as Trans. of the Assurance Medical Society 1916.

688. **1898-1919. Medical (The) Temperance Review.** (Monthly) v. 1-21. 12° London, Jany. 1898–May 1919. WL 13070, RCS, SG. v. 11 ends with n. 6, June 1908; Oct. 1908 Special no. 'in memoriam J. J. Ridge'; From Feb. 1909, v. 12—May 1919, v. 21 called n. s., n. 1-28 (quarterly).
Continuation of Medical Pioneer 1892.

689. **1898-1920. Transactions** of the School Dentists' Society. n. 1-29, v. 1-7. 8° London, 25 Nov. 1898–March 1920. WL 21658A, RSM.

690. **1898—. Grant (The) Medical College Magazine.** v. 1—. 8° Bombay, 1898—. Monthly; from 1906 quarterly. WL 9284 (no registration), Crawford.

691. **1898—. Journal (The) of Tropical Medicine.** A monthly journal. v. 1—. 8° London, Aug. 1898—. After 1905 incorporates Climate 1899. From 1907, v. 10 'Journal of Tropical Medicine and Hygiene.' WL 11587, RCS, SG.

692. **1898—. Stethoscope (The).** Bristol medical students' journal. (later: Bristol medical clubs' union journal.) v. 1—. 4° Bristol, 1898—. WL 20599, BM, SG.

693. **1898—. University of Toronto Studies.** 8° Toronto, 1898—.
Anatomical series. n. 1—, 1900—. WL 22115.
Medical Research Fund. 1—, 1915—. WL 22119.
Pathological Series. 1—, 1906—. WL 22121.
Physiological Series. 1—, 1900—. WL 22123.
Psychological Series. v. 1—. 1898—. WL 22124.
RCS (lacking Psychological s.), SG. (Also non-medical series.)

694. **1899. Transactions** of the Jenner Institute of Preventive Medicine. (Late British Institute of Preventive Medicine.) 2. s., 1 v. 8° London, 1899. RCS, SG.
Continuation of Transactions of the British Institute of Preventive Medicine 1897.
Continued as Lister Institute Collected Papers 1904.

695. **1899-1900. British (The) Physician.** A monthly journal. v. 1-2. 4° London, July 1899–Oct. 1900. WL 3583, SG.

696. **1899-1901. Dosimétrie (La) au Canada.** Revue mensuelle de médecine et de thérapeutique. v. 1-3. 8° Montreal, July 1899–July 1901. WL 7466 (no registration), SG, MacD.

697. **1899-1901. Indian (The) Homoeopathician.** v. 1-2, n. 9. Lucknow, June 1899–Feb. 1901. SG.

698. **1899-1903. Reports to the Malaria Committee** of the Royal Society. Series 1-8, 1899-1903. 8° London, 1900-1903. WL 18316, RCS, SG. Series 2 called 'Further reports . . .'

699. **1899-1905. Climate.** A quarterly journal of health and travel. v. 1-5. 8° London, Oct. 1899–Oct. 1905. Merged into Journal of Tropical Medicine (1898). WL 6391, RCS, SG. n. 23-24 called v. 6 have continuous pagination with v. 5.

700. **1899-1907. Archives of Neurology** from the Pathological Laboratory of the London County Asylums, Claybury, Essex, edited by F. W. Mott. v. 1-3. 8° London (1899)-1907.
Continued as Archives of Neurology and Psychiatry 1909. WL 1881, RCS, SG.

700a. **1899-1907. Medical (The) Examiner.** v. 1-8, n. 1. 8° London, Oct. 1899–Jany. 1907. BM, WL 13018 (1900-1907).

701. **1899-1907. Paidologist.** London, 1899-1907. WL 15926, BM.
Continued as Child Study 1908.

702. **1899-1907. Transactions** of the Otological Society of the United Kingdom. v. 1-8, 1899/1900–1906/7. 8° London, 1900-1907.
Merged in Proc. R. S. M. 1907. WL 21636, RCS, SG.

703. **1899-1908. Tuberculosis,** the journal of the national association for the prevention of consumption and other forms of tuberculosis. (Irregular) v. 1-4, n. 6. 8° London, Oct. 1899–June 1908. WL 21960A, BM, RCS incomplete, SG.

704. **1899-1917. Polyclinic (The);** being the journal of the medical graduates' college. v. 1-21. 8° London, May 1899-1917. WL 16345, RCS (incomplete), SG.

705. **1899-1921. Canadian Practitioner and Review.** Title v. 24-46, Jany. 1899–Dec. 1921 of Canadian Practitioner 1883. WL 5919, RCS, SG, MacD.

706. **1899-1927. Memoirs of the Liverpool School of Tropical Medicine.** n. 1-21; n. s., n. 1-3. 4° & 8° Liverpool 1899-1900; 1924-1927. n. 1, edit. 2, 1902; n. 5 in 2 pts.; n. 6 was issued as an independent book:—R. *Ross* 'Mosquito brigades and how to organize them.' 8° London, 1902.
Continued as Annals of Tropical Medicine 1907. WL 13405, RCS.

707. **1899-1931. Bulletin (Le) médical de Québec.** v. 1-32. 8° Québec, Sept. 1899-1931.
Continued as Bulletin international de la société médicale des hopitaux universitaires de Quebec 1931. WL 4467 (no registration), SG, MacD.

708. **1899-1932. Transactions** of the Optical Society. London 1899-1932. WL 21635, BM.

709. **1899—. British (The) Food Journal and Hygienic Review.** The official organ of the International Committee on Adulteration. v. 1—. 4° London, 1899—. WL 3553, SG.

710. **1899—. Charing Cross Hospital (The) Gazette.** v. 1—. 8° London, Jany. 1899—. WL 6077, RCS, SG.

711. **1899—. Medical (The) Review.** v. 2, n. 11—. 4° London, Aug. 1899—.
Continuation of Medical and Surgical Review of Reviews 1898. WL 13062, RCS and BM end 1929, v. 32, SG.

712. **1899—. Broadway (The) or Westminster Hospital Gazette.** v. 1—. 8° London, Feb. 1899—. WL 22955A, RCS (incomplete).

This list does not profess to weigh the periodicals which it describes. For such a valuation the following studies may be consulted:

Horner (N. G.) Medical journalism in the British Empire. — Lancet 1932, 2, 273
Sprigge (S. S.) (under pseudonym 'A Chronicler')—Lancet 1936, 2, 1422 & 1485

But in fact many doubtful cases have been excluded in the compilation of this list, a few of which might prove more worthy of inclusion than some of the ephemera which have been admitted. The list in effect provides a ground-work for any detailed study of the periodicals themselves. Further items have already come to hand, of which the more notable are:

1758. Medical, chirurgical and anatomical cases . . . Royal Academy of Sciences at Stockholm. Translated. London.
1839. Zoo-magnetic Journal. Edinburgh.
1853-4. Sheffield Homoeopathic Lancet.
1859. Homoeopathic News. Manchester.
1861. Quarterly Clinical Reports. Geelong, Australia.
1868-9. Hydropathic Record. Malvern.
1885. Magnetic World . . . curative electric science. Newcastle.
1893. Health. Belfast.
1898. Revue générale de pharmacie. Montreal.
1898-9. Manchester Royal Infirmary Students' Gazette.

INDEX

Abeille médicale 433.
Aberdeen Lancet 97.
Aberdeen Medical Student 365.
Aberdeen Sanitary Reformer 284.
Aberdeen Water-Cure Journal 269.
Abstainer and Temperance Physician 302 A.
Adelaide Med. Students' Soc. Review 550.
Aesculapian Society 451.
Anderson's Quarterly Jour. of med. Sciences 79.
Annals and Trans. of the British Homoeop. Soc. 282.
Annals of Anatomy and Physiology 213.
Annals of Chemical Medicine 432.
Annals of Chymistry 150.
Annals of Medicine 32 .
Annals of Medicine and Surgery 56.
Annals of Mesmerism 155.
Annals of Military and Naval Surgery 295.
Annals of Pharmacy and Materia Medica 93.
Annals of Pharmacy and Practical Chemistry 225.
Annals of Sir Patrick Dun's Hospital 98.
Annals of the London Homoeop. med. Dispensary 141.
Annual Medical Review 47.
Annual Reports of the Trans., South Durham & Cleveland med. Soc. 386.
Annual Reports on Diseases of the Chest 394.
Anthropologia 383.
Anthropological Review 300.
Anti-Smoker 151.
Anti-Tobacco Journal 267.
Anti-Vaccinator 366.
Archives of clinical skiagraphy 645.
Archives of Dentistry 304.
Archives of Medicine 260.
Archives of Neurology 700.
Archives of Skiagraphy 656.
Archives of Surgery 549.
Archives of the Röntgen Ray 670.
Asclepiad 492.
Association Medical Journal 233.
Association of Medical Officers of Health 336.
Asylum Journal . . . for British Guiana 457.
Asylum Journal of Mental Science 234.
Australasian Anthropological Journal 646.
Australasian Chemist and Druggist 426.
Australasian Homoeopathic Medical Gazette 631.
Australasian Journal of Pharmacy 515.
Australasian Medical Gazette 461.
Australian Anthropologist 675.
Australian Botanic Practitioner 545.
Australian Health Society: Health Lectures 511.
Australian Health Society: Publications 422.
Australian Journal of Dentistry 672.
Australian Medical Gazette 345.
Australian Medical Journal, Melbourne 253.
Australian Medical Journal, Sydney 178.
Australian Practitioner 419 and 519.

Barbadoes Medical Annual 562.
Barth 361.
Bengal Medical Record 216.
Biennial Retrospect of Medicine 315.
Birmingham Medical Review 372.
Brain 430.
Bristol Medico-chirurgical Journal 483.
British and Colonial Druggist 429.
British and Foreign Medical Review 124.
British and Foreign Medico-Chirurgical Review 201.
British Annals of Medicine 128.
British Dental Journal 680.
British Food Journal 709.
British Guiana Medical Annual 558.
British Gynaecological Journal 506.
British Journal of Dental Science 254.
British Journal of Dermatology 540.
British Journal of Homoeopathy 163.
British Medical Journal (1799) 35.
British Medical Journal (1857—) 263.
British Physician (1716) 3.
British Physician (1899-1900) 695.
British Quarterly Journal of Dental Surgery 156.
British Record of Obstetric Medicine 192.
British-American Journal 279.
British-American Journal of Medical and Physical Science 175.
British-American Medical and Physical Journal 211.

Broadway, or Westminster Hospital Gazette 712.
Bulletin de la Société Médicale de l'Ile Maurice 559.
Bulletin Médical de Québec 707.

Calcutta Journal of Medicine 338.
Calcutta Medical News 441.
Caledonian Medical Journal 579.
Canada Health Journal, London Ontario 349.
Canada Health Journal, Toronto and Ottawa 447.
Canada Journal of Dental Science 337.
Canada Lancet, Montreal 297.
Canada Lancet, Toronto 357.
Canada Medical and Surgical Journal 289.
Canada Medical Journal (1852/3) 223.
Canada Medical Journal (1864-72) 310.
Canada Medical Record 371.
Canadian Journal of Homoeopathy 247.
Canadian Journal of Medical Science 409.
Canadian Journal of Medicine 673.
Canadian Medical Review 636.
Canadian Medical Times 377.
Canadian Pharmaceutical Journal 340.
Canadian Practitioner 482.
Canadian Practitioner and Review 705.
Ceylon Medical Journal 525.
Charing Cross Hospital Gazette 710.
Chemical Gazette 153.
Chemical News 276.
Chemical Record 218.
Chemical Times 193.
Chemist (1840-46) 143.
Chemist (1849-53) 204.
Chemist (1854-58) 237.
Chemist and Druggist 277.
Chemist and Druggist of Australasia 516.
Chikitsaka-o-Samalochaka 634.
Chloralum Review 358.
Cholera Gazette 102.
Christian Physician 118.
Chrono-Thermalist 217.
Circular of Selections, . . . Med. & Phys. Soc. of Bengal 133.
Climate 699.
Clinical Excerpts 669.
Clinical Journal 597.
Clinical Lectures, . . . London Hospital 306.
Clinical Sketches 632.
Clinique 627.
Coffin's Botanical Journal and Medical Reformer 188.
Collection of papers, . . . Institution for . . . fever in Newcastle 41.
Collective Investigation Record 477.
Continental and British Medical Review 130.
Continental Medical Repertory 57.
Contributions to physical and medical knowledge 36.

Dental Patients 581.
Dental Record 463.
Dental Review 273.
Dentist 678.
Descriptive Catalogue of the Clinical Museum, and Journal 616.
Diet and Hygiene 531.
Dietetic Reformer 289.
Dissertations . . . Royal Medical Society 582.
Doctor (1832-37) 105.
Doctor (1871-78) 363.
Doctor (1893-1917) 611.
Doctor's Magazine 583.
Dominion Dental Journal 551.
Dominion Medical Journal 334.
Dominion Medical Monthly 612.
Dominion Sanitary Journal 473.
Dosimétrie au Canada 696.
Dublin Hospital Gazette 171.
Dublin Hospital Gazette new series 239.
Dublin Hospital Reports 61.
Dublin Journal of Medical and Chemical Science 104.
Dublin Journal of Medical Science (1836-45) 122.
Dublin Journal of Medical Science (1872-1922) 373.
Dublin Medical and Physical Essays 45.
Dublin Medical Press 140.
Dublin Medical Press and Circular 317.
Dublin Medical Transactions 95.
Dublin Quarterly Journal of Medical Science 181.

Eclectic Medical Journal 264 A.
Edinburgh Clinical and Pathological Journal 471.
Edinburgh Health Society 449.
Edinburgh Hospital Reports 603.
Edinburgh Journal of Medical Science 83.
Edinburgh Medical and Surgical Journal 43.
Edinburgh Medical Journal 246.
Edinburgh Medical Missionary Society, Occasional Papers 238.
Edinburgh Monthly Journal of Medical Science 146.
English Eclectic Medical Practitioner 542.
Essays and Observations 6.
Ethnological Journal 198.

Family Doctor 455.
Family Doctor and People's Medical Adviser 507.
Family Oracle of Health 76.
Family Physician (1866) 318.
Family Physician (1873) 378.
First Aid and St. John's Ambulance Gazette 628.
Food and Health 660.
Food and Sanitation 604.
Food, Drugs and Drink 586.
Food Journal 355.
Food, Water and Air 360.
Forbidden Book 207.
Forceps 166.
Foreign Medical Review 19.

Gazette Médicale 313.
Gazette Médicale de Montréal 524.
Georgetown Hospital Reports 520.
Gasgow Hospital Reports 681.
Glasgow Medical Examiner 100.
Glasgow Medical Journal 90.
Good Health 587.
Grant Medical College Magazine 690.
Guardian of Health 428.
Guide Sanitaire 391.
Guyoscope 671.
Guy's Hospital Gazette 374.
Guy's Hospital Reports 126.

Half-yearly Abstract of the Medical Sciences 177.
Health (1862) 290.
Health (1877-81) 421.
Health (1883-86) 475.
Health and Home 486.
Health Journal 532.
Health Journal and Record 478.
Health Lectures 405.
Health Messenger 571.
Health of Towns Magazine 185.
Health Record 568.
Health Society of New South Wales, Publications 410.
Healthian 151 A.
Healthy Life and Hydropathic News 479.
Herald of Health (London) 404.
Herald of Health (Melbourne) 685.
Hippocrates Ridens. 2.
Homoeopath 566 A.
Homoeopathic Echo, 241.
Homoeopathic Medical Record 588.
Homoeopathic Messenger 647.
Homoeopathic Observer 294.
Homoeopathic Progress in Australia 350.
Homoeopathic Record 243.
Homoeopathic Times 205.
Homoeopathic World 322.
Homoeopathist 229 A.
Hospital 514.
Hospital Gazette 504.
Hospital Nursing Mirror 537.
Human Nature 330.
Hunterian Journal 658.
Hyderabad Medical Journal 244.
Hygeia 40.
Hygeian Journal 103.
Hygeist 154.
Hygiene 556.
Hygienic Advertiser 566 B.
Hygienic Review 601 A.

Illustrated Medical News 533.
India Journal of Medical and Physical Science 123.
India Journal of Medical Science 116.
India Register of Medical Science 189.
Indian Annals of Medical Science 236.
Indian Homoeopathic Review 575.
Indian Homoeopathician 697.
Indian Journal of Pharmacy 617.
Indian Lancet (1859-61) 271.
Indian Lancet (1895-1908) 637.
Indian Medical Gazette 323.
Indian Medical Journal 491.
Indian Medical Record 560.
Indian Medico-chirurgical Review 602.
Institute 209.
Intercolonial Medical Journal of Australasia 652.
Intercolonial Quarterly Journal of Medicine and Surgery 622.
Invalid's Guide 359 A.
Irish Hospital Gazette 382.
Irish Medical Journal 344.

Jamaica Physical Journal 117.
Jamaica Quarterly Journal of Medicine 278.
Jamsetji Jijibhai Hospital . . . Reports 584.
Jennerian 468.
Journal d'Hygiène populaire 493.
Journal de Médecine de Québec 84.
Journal of Anatomy and Physiology 321.
Journal of Anthropology 351.
Journal of Balneology and Climatology 667.
Journal of British and Foreign Health Resorts 548.
Journal of British Ophthalmology 303.
Journal of Cutaneous Medicine 326.
Journal of Health 199.
Journal of Health and Disease 179 A.
Journal of Hydrotherapeutics 518.

Journal of Laryngology and Rhinology 527.
Journal of Medicine and Dosimetric Therapeutics 448.
Journal of Mental Science 268.
Journal of Morbid Anatomy 87.
Journal of Ophthalmology 129.
Journal of Pathology and Bacteriology 595.
Journal of Physical Regeneration 222 A
Journal of Physiology 431.
Journal of Psychological Medicine 197.
Journal of Public Health 71.
Journal of Public Health and Monthly Record 186.
Journal of Public Health and Sanitary Review 242.
Journal of State Medicine 599.
Journal of the Anjuman-i-Panjab 367.
Journal of the Anthropological Institute 375.
Journal of the Anthropological Society of Bombay 517.
Journal of the Anthropological Society of London 309.
Journal of the Bengal branch of the B. M. A. 314.
Journal of the British Dental Association 460.
Journal of the British Homœopathic Society 609.
Journal of the Congress . . . Sanitary Institute 414.
Journal of the Ethnological Society 200.
Journal of the Health Society for Calcutta 503.
Journal of the Hospitals Association 488.
Journal of the Irish Medical Association 325.
Journal of the Leprosy Investigation Committee 555.
Journal of the Sanitary Institute 629.
Journal of Tropical Medicine 691.

King's College Hospital Reports 605.
Kingston Medical Quarterly 650.

Lancet 78.
Lancette Canadienne 184.
Lectures on Public Health 392.
Leeward Islands Medical Journal 563.
Letters and essays on the small-pox 17.
Letters from Dr. Withering . . . 27.
Linacre Reports 618.
Liverpool and Manchester Medical and Surgical Reports 385.
Liverpool Health of Towns Advocate 174.
Liverpool Medical and Surgical Reports 327.
Liverpool Medical Gazette 106.
Liverpool Medical Journal 111.
Liverpool Medico-Chirurgical Journal 264.
Living Age 415.
London and Edinburgh Monthly Journel of Medical Science 146.
London Homœopathic Hospital Reports 572.
London Hospital Gazette 630.
London Journal of Medicine 203.
London Medical and Physical Journal 54.
London Medical and Surgical Journal 89.
London Medical and Surgical Spectator 46.
London Medical Examiner 212.
London Medical Gazette 86.
London Medical Journal (1781) 21.
London Medical Journal (1871) 358 A.
London Medical Press and Circular 318 A.
London Medical Record 390.
London Medical Recorder 534.
London Medical Repository 53.
London Medical Review (1801-02) 39.
London Medical Review (1808-12) 48.
London Medical Review (1860-63) 280.
London Medical Review and Magazine 37.
London Medical Surgical and Pharmaceutical Repository 53.
London Physiological Journal.

Madras Journal of Medical Science 221.
Madras Medical Record 552.
Madras Monthly Journal of Medical Science 354.
Madras Quarterly Journal of Medical Science 281.
Madras Quarterly Medical Journal 138.
Magazine of Health (1836) 119.
Magazine of Health (1857-8) 521.
Magazine of the London (Royal Free Hospital) School of Medicine for Women 639.
Magnetic Review 394 A.
Magnetiser's Magazine 55.
Malthusian 438.
Man (1755) 7.
Man (1885-6) 501.
Manchester Homœopathic Lancet 280.
Manchester Medical and Surgical Reports 352.
Manitoba and West Canada Lancet 650.

Manitoba, North-west and British Columbia Lancet 522.
Maritime Medical News 538.
Medical Adviser and Farm Help 508.
Medical Adviser and guide to health 75.
Medical and Chirurgical Review (1794-1808) 31.
Medical and Chirurgical Review (1803-06) 42.
Medical and Philosophical Commentaries 15.
Medical and Physical Journal 38.
Medical and Political Record 68 A.
Medical and Professional Review 510.
Medical and Surgical Review 302.
Medical and Surgical Review of Reviews 679.
Medical Annual 484.
Medical Argus 170.
Medical Chronicle (London) 190.
Medical Chronicle (Manchester) 498.
Medical Chronicle (Montreal) 235.
Medical Circular 226.
Medical Commentaries 20.
Medical Communications 22.
Medical Critic 285.
Medical Dispatch 134.
Medical Dissenter 115.
Medical Enquirer 403.
Medical Essays and Observations, Edinburgh 4.
Medical Essays and Observations (Paris) 10.
Medical Examiner (1829-30) 94.
Medical Examiner (1876-78) 407.
Medical Examiner (1899-1907) 700 A.
Medical Extracts 30.
Medical Facts and Observations 25.
Medical Free Press 358 B.
Medical Freedom 359.
Medical Guild Quarterly 684.
Medical Intelligencer (1818) 62.
Medical Intelligencer (1819-23) 66.
Medical Magazine 595.
Medical Mirror 308.
Medical Miscellany (1768) 12.
Medical Miscellany (1839) 135.
Medical Missions at Home and Abroad 439.
Medical Missions in India 640.
Medical Museum 9.
Medical News 456.
Medical Notes and Queries 381.
Medical Observations and Inquiries 8.
Medical Observer 44.
Medical Observer and Statistical Inquirer 270.
Medical Pioneer 593.
Medical Press 311.
Medical Press and Circular 324.
Medical Quarterly Review 109.
Medical Record (1821) 68 A.
Medical Record (1842) 148.
Medical Record (1873) 379.
Medical Record (1890) 553.
Medical Record of Australia 286.
Medical Records and Researches 34.
Medical Reformer (1852) 222 B.
Medical Reformer (1885) 502.
Medical Register 63.
Medical Replies 676.
Medical Reporter (1829) 91.
Medical Reporter (1892-5) 591.
Medical Reports (Madras) 215.
Medical Reprints 557.
Medical Review 711.
Medical Review and Invalid's Guide 368 A.
Medical Science 523.
Medical Society of Students at Edinburgh 14.
Medical Spectator 24.
Medical Student 84 A.
Medical Temperance Journal 347.
Medical Temperance Review 688.
Medical Times 139.
Medical Times and Gazette 227.
Medical Times and Hospital Gazette 607.
Medical Transactions, R. C. P., London 13.
Medical Week 594.
Medical World 648.
Medicina Curiosa 1.
Medico-Chirurgical Journal 64.
Medico-Chirurgical Journal and Review 58.
Medico-Chirurgical Review 80.
Medico-Chirurgical Review and Journal 68.
Medico-Chirurgical Transactions 49.
Medico-Pharmaceutical Abstract 393.
Melbourne Lancet 265.
Melbourne Medical Record 399.
Memoirs of the Liverpool School of Tropical Medicine 706.
Memoirs of the Medical Society of London 23.
Memoirs of the Royal Academy of Surgery at Paris 5.
Memoirs read before the Anthropological Society of London 301.
Mère et l'enfant 554.
Mesmerist 157.
Middlesex Hospital Journal 674.
Midland Medical and Surgical Reporter 88.
Midland Medical Miscellany 465.
Midland Quarterly Journal of the Medical Sciences 255.

Mind 413.
Modern Medicine 596.
Modern Physician 424.
Molar 679 A.
Monthly Archives of the Medical Sciences 112.
Monthly Gazette of Health 59.
Monthly Gazette of Practical Medicine 99.
Monthly Homœopathic Record 291.
Monthly Homœopathic Review 251.
Monthly Journal of Homœopathy 212 A.
Monthly Journal of Medical Science 176.
Monthly Journal of Medicine 240.
Monthly Journal of Medico-Chirurgical Knowledge 107.
Monthly Journal of Popular Medicine 69.
Monthly Magazine of Pharmacy 412.
Monthly Medical Review 563 A.
Monthly Retrospect of the Medical Sciences 194.
Monthly Review of Dental Surgery (1872-80) 368.
Monthly Review of Dental Surgery (1880) 442.
Montreal General Hospital, Pathological Reports 411.
Montreal Homœopathic Record 661.
Montreal Medical Gazette 167.
Montreal Medical Journal 539.
Montreal Pharmaceutical Journal 561.
Museum Journal of the R. C. S. of England 585.

New Doctor 121.
New London Medical Journal 26.
New Medical Adviser 120.
New Medical and Physical Journal 50.
New South Wales Medical Gazette 356.
New Sydenham Society 274.
New Zealand Medical Journal 528.
Newcastle and Gateshead Pathological Society 219.
Newton Branch of the Provincial Medical and Surgical Association 136.
North of England Medical and Surgical Journal 96.
Northampton Homœopathic Record 220.
Northern Health Messenger 564.
Northern Journal of Medicine 168.
Northern Lancet 546.
Northumberland and Durham Medical Journal 610.
Norwich Homœopathic Journal 224.
Notes of a new truth 249.
Nurses' Journal 578.
Nursing News 647 A.
Nursing Notes 529.
Nursing Record 536.
Nursing World 630 A.

Observations on Surgical Diseases 191.
Obstetrical Journal 388.
Ontario Journal of Health 416.
Ontario Medical Journal 592.
Ophthalmic Hospital Reports 261.
Ophthalmic Review (1864-67) 305.
Ophthalmic Review (1881-1916) 462.
Organon 425.
Origin and organization . . . Canadian Medical Assoc., with Proceedings 328.

Paidologist 701.
Parisian Chirurgical Journal 28.
Penny Herald of Health 423.
People's Medical Adviser 164.
People's Medical Journal 210.
People's Phrenological Journal 158.
Pharmaceutical Journal 147.
Pharmaceutical Journal of New South Wales 535.
Pharmaceutical Times 179.
Phonographic Medical Library 668.
Phonographic Record of Clinical Teaching 626.
Photographic Clinique 380.
Phreno-Magnet 159.
Phrenological Journal 77.
Phrenological Magazine 450.
Phrenological Record 588 A.
Physician 292.
Physique 565.
Polyclinic 704.
Popular Magazine of Anthropology 319.
Popular Medical Monthly 569.
Popular Phrenologist 651.
Practitioner 341.
Proceedings and Transactions of the Pathological Society of Toronto 544.
Proceedings at the anniversary meeting of the Hunterian Society 101.
Proceedings of a Society for promoting inoculation 18.
Proceedings of the—
Allahabad Medical Society 464.
Anatomical Society 530.
Anthropological and Ethnological Societies 353.
Border Medical Society 137.
Brighton and Sussex Medico-Chirurgical Society 613.
British Pharmaceutical Conference 299.
Canadian Institute of Homœopathy 312.
Canadian Medical Association 346.

Dublin Obstetrical Society 364.
Hyderabad Medical and Physical Society 228.
Laryngological Society 608.
Life Assurance Medical Association 623.
Medical and Physical Society of Calcutta 108.
Medical Society of London 370.
Medico-Chirurgical Society of Montreal 466.
New South Wales branch of the B. M. A. 443.
North London Medical Society 229.
North West Provinces and Oudh branch of the B. M. A. 464.
Northwestern Association of M. O. H. 400.
Pathological Society of Dublin 145.
Physiological Society 485.
Psychological Society 402.
Royal Medical and Chirurgical Society 250.
St. George's Medical Society 259.
Society for the Study of Inebriety 496.
South Australian branch of the B. M. A. 436.
Staffordshire branch, B. M. A. 397.
West London Medico-Chirurgical Society 467.
Westminster Medical Society 195.
Progress of Medical Science 619.
Provincial Homœopathic Gazette 231.
Provincial Medical and Surgical Journal 144.
Provincial Medical Gazette 92.
Provincial Medical Journal (Halifax) 331.
Provincial Medical Journal (Leicester) 505.
Provincial Medical Journal (London) 152.
Psychological Magazine 565 A.
Psychological Review 425 A.
Public Health (1868-9) 333.
Public Health (1873-7) 384.
Public Health (1888—) 541.
Public Health Engineer 663.
Public Health Magazine 401.
Publications of the Sloane Society 489.

Quarterly Journal and Transactions of the Pharmaceutical Society of Victoria 266.
Quarterly Journal of Dental Science 258.
Quarterly Journal of Foreign Medicine and Surgery 65.
Quarterly Journal of the Calcutta Medical and Physical Society 131.
Quarterly Medical and Surgical Journal for the North-Western Provinces 165.
Quarterly Medical Journal for Yorkshire 606.
Quarterly Medical Recorder 208.
Quarterly Medical Review 85.
Quarterly Papers of the Edinburgh Medical Missionary Society 469.
Quarterly Review of Deaf-mute Education 513.
Quarterly Therapeutic Review 480.
Queen's Medical Magazine 641.

Reading Pathological Society Transactions 635.
Report of cases . . . Anatomical Society of Edinburgh 113.
Report of Proceedings of the North Staffordshire Medical Society 256.
Report of the Proceedings of the Northumberland and Durham Medical Society 283.
Report of the Proceedings of the Pathological Society 180.
Reports on Diseases of the Chest 406.
Reports on the progress of practical and Scientific Medicine 335.
Reports principally concerning . . . nitrous acid in the Venereal disease 33.
Reports to the Malaria Committee of the Royal Society 698.
Retrospect of Medicine 182.
Retrospect of Practical Medicine and Surgery 142.
Retrospect of Surgery 459.
Revue Médicale 662.
Royal Humane Society, Reports; — Transactions 16.
Royal London Ophthalmic Hospital Reports 452.
Royal London Ophthalmic Hospital Reports and Journal 288.

St. Andrews Medical Graduates' Association. Transactions 329.
St. Bartholomew's Hospital Journal 614.
St. Bartholomew's Hospital Reports 316.
St. George's Hospital Gazette 600.
St. George's Hospital Reports 320.
St. Mary's Hospital Gazette 642.
St. Thomas's Hospital Gazette 580.
St. Thomas's Hospital Reports 127.
Sanitary Engineer 444.
Sanitary Engineering 458.
Sanitary Inspector 417.

Sanitary Journal (Glasgow) 427
Sanitary Journal (Toronto) 396.
Sanitary Journal for Scotland 408.
Sanitary Officer 601 B.
Sanitary Record 398.
Sanitary Record and Social Observer 343.
Sanitary Register 420.
Sanitary Reporter 298.
Sanitary Review (1857-58) 257.
Sanitary Review (1875-76) 398 A.
Sanitary World 490.
Sanitation in the West 589.
Scalpel (1823-4) 74.
Scalpel (1859) 268 A.
Scalpel (1896-1900) 649.
Science of Man 686.
Scientific Memoirs by Medical Officers of the Army of India 495.
Scottish and North of England Medical Gazette 161.
Scottish Medical and Surgical Journal 665.
Scottish Medical Press 332.
Select Papers on the different branches of medicine 11.
Selection of interesting cases 52.
Selection of papers . . . on . . . insanity 214.
Sheffield Medical Journal 590.
Society of M. O. H., Annual Reports 387.
South African Journal of Health 682.
South African Medical Journal 499.
Specialist 445.
Speculum 500.
Stethoscope (Bristol) 692.
Stethoscope (London) 293.
Students' Journal and Hospital Gazette 389.
Studies from the Physiological Laboratory of Owens College 566.
Studies in Anatomy . . . Owens College 573.
Studies in Clinical Medicine 543.
Sydenham Society 169.
Sydney University Medical Society 643.

Teratologia 620.
Therapist 577.
Thompson Yates Laboratories Report 683.
Tocsin 547.
Transactions and Annual Report of the West Kent Medico-Chir. Soc. 615.
Transactions of a Medical Society in Trinidad 114.
Transactions of a Society for the improvement of Med. and Chir. knowledge 29.
Transactions of the—
Academy of Medicine, Toronto 262.
Academy of Medicine in Ireland 476.
Anthropological Society 296.
Associated Apothecaries and Surgeon Apothecaries 72.
Association of Fellows . . . K. Q. C. P. I. 60.
Belfast Clinical and Pathological Society 232.
Brighton Health Congress 454.
Bristol Medico-Chirurgical Society 395.
British Balneological and Climatological Society 633.
British Institute of Preventive Medicine 657.
British Laryngological and Rhinological Association 576.
British Orthopaedic Society 624.
Burma branch of the B. M. A. 570.
Calcutta Medical Society 446.
Canada Medical Association 418.
China Medico-Chirurgical Society 172.
Clinical Society 339.
Cork . . . medical and surgical Society 307.
Cornwall Medical Association 149.
Dermatological Society 625.
Edinburgh Obstetrical Society 342.
Epidemiological Society 245.
Ethnological Society 287.
Glasgow Obstetrical and Gynaecological Society 653.
Glasgow Pathological and Clinical Society 481.
Grant College Medical Society 574.
Hong Kong Medical Society 512.
Indian Medical Congress 621.
Intercolonial Medical Congress of Australasia 526.
Jenner Institute of Preventive Medicine 694.
Life Assurance Medical Officers' Association 687.
Liverpool Odontological Society 654.
Medical and Physical Society of Bengal 132.
Medical and Physical Society of Bombay 125.
Medical and Physical Society of Calcutta 82.
Medical Society of King's College, London 248.
Medical Society of London 51.
Medico-Botanical Society 70.
Medico-Chirurgical Society of Edinburgh 81.

Medico-Chirurgical Society of Glasgow 644.
National Association of General Practitioners 173.
North of England Obstetrical and Gynaecological Society 601.
Obstetrical Society 275.
Odontological Society 252.
Ophthalmological Society 453.
Optical Society 708.
Otological Society 702.
Pathological Society of London 183.
Pathological Society of Manchester 567.
Perthshire Medical Association 434.
Phrenological Society 67.
Provincial Medical and Surgical Association 110.
Royal Academy of Medicine in Ireland 476.
Sanitary Institute 437.
School Dentists' Society 689.
Society of Anaesthetists 666.
Society of Medical Officers of Health 435.
South Indian branch of the B. M. A. 497.
Ulster Medical Society 638.
Vaccination Inquiry 470.
Willan Society 474.
Treatment 664.
Trocar 265 A.
Tuberculosis 703.

Unfettered Canadian. Medical Reform 202.
Union Médicale du Canada 376.
University of Toronto Studies 693.
Upper Canada Journal of Medicine 222.

Vaccination Inquirer 440.
Vegetarian Advocate 196.
Vegetarian Messenger 206.
Vegetarian Review 622 A.

Water 472.
Water Cure Journal 187.
Weekly Dentist 677.
Weekly Exhibition Record 487.
Weekly Medico-Chirurgical and Philosophical Magazine 73.
West London Medical Journal 655.
West Riding Lunatic Asylum Medical Reports 362.
Westminster Hospital Reports 509.

Year-book of Medicine 272.
Year-book of Pharmacy 304 A and 348.
Year-book of Treatment 494.

Zoist 162.